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## 2018 - 2019



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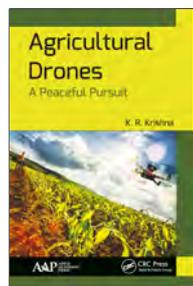


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## Agricultural Drones

A Peaceful Pursuit



K. R. Krishna

This volume deals with the increasing importance of the role of aerial robots in managing agricultural farms and natural resources. It explores the advanced sensors and imaging capabilities of drones that give farmers new ways to increase yields and reduce crop damage. An introductory chapter provides historical data, with details about various models of drones as well as the most recent and popular agricultural drones in usage. The book goes on to discuss such topics as the use of drones for soil fertility, production agronomy, irrigation, weed control, pest and disease control, grain yield forecasting, and economic advantages from drone use.

Apple Academic Press

Market: Agriculture

March 2018: 229 x 152: 394pp

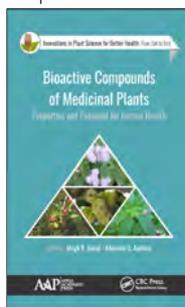
Hb: 978-1-771-88595-9: **£124.00**

eBook: 978-1-315-19552-0

\* For full contents and more information, visit: [www.crcpress.com/9781771885959](http://www.crcpress.com/9781771885959)

## Bioactive Compounds of Medicinal Plants

Properties and Potential for Human Health



Edited by **Megh R. Goyal**, Point Pleasant, New Jersey, USA and **Ademola O. Ayeleso**

*Bioactive Compounds of Medicinal Plants: Properties and Potential for Human Health* sheds light on the immense potential of medicinal plants from human health from different technological aspects, focusing on the continent of Africa. The volume presents new research on bioactive compounds in medicinal plants that provide health benefits, medicinal plant and plant products for health promotion, medicinal plants for the management of diabetes mellitus, and medicinal plants for the management of hypertension.

Apple Academic Press

Market: Botany & Plant Science

June 2018: 229 x 152: 344pp

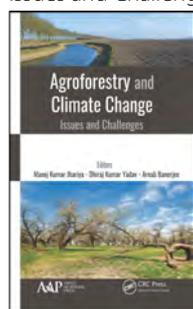
Hb: 978-1-771-88648-2: **£124.00**

eBook: 978-1-315-14747-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886482](http://www.crcpress.com/9781771886482)

## Agroforestry and Climate Change

Issues and Challenges



Edited by **Manoj Kumar Jhariya**, **Dhiraj Kumar Yadav** and **Arnab Banerjee**

This book, *Agroforestry and Climate Change: Issues and Challenges*, addresses the diverse issues of climate change and how agroforestry systems can be effectively utilized to minimize these impacts and enhance sustainability. The volume begins by describing the recent understandings of the scenario of climate change and its issues and challenges and provides an in-depth analysis of the potential of agroforestry toward climate change mitigation and adaptation.

Apple Academic Press

Market: Agriculture

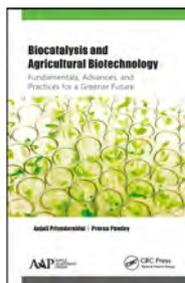
April 2019: 229 x 152: 355pp

Hb: 978-1-771-88790-8: **£124.00**

eBook: 978-0-429-05727-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887908](http://www.crcpress.com/9781771887908)

## Biocatalysis and Agricultural Biotechnology: Fundamentals, Advances, and Practices for a Greener Future



**Anjali Priyadarshini** and **Purna Pandey**

This volume looks at the application of a variety of technologies that are being used for crop improvement, metabolic engineering, and the development of transgenic plants. It covers major plant biotechnology procedures and techniques, their impact on novel agricultural development, and crop plant improvement. Also discussed are the use of "white biotechnology" and "metabolic engineering" as prerequisites for a sustainable development. Conventional and advanced practices are discussed in detail, including the scope and history of agricultural biotechnology, crop improvement practices, plant tissue culture, genetic modification for crop improvement, and production of transgenic crops.

Apple Academic Press

Market: Botany & Plant Science

September 2018: 229 x 152: 348pp

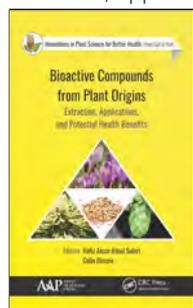
Hb: 978-1-771-88689-5: **£124.00**

eBook: 978-1-351-16744-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886895](http://www.crcpress.com/9781771886895)

## Bioactive Compounds from Plant Origins

Extraction, Applications, and Potential Health Benefits



Edited by **Hafiz Ansar Rasul Suleria** and **Colin Barrow**

Series: *Innovations in Plant Science for Better Health*

This new volume explores the importance of phytochemicals from plants in therapeutics and human health. Its focus is on the extraction of bioactive compounds and their applications in human health. Natural products and their bioactive compounds are increasingly utilized in preventive and therapeutic medication as well as for the production of pharmaceutical supplements and more recently as food additives to increase the functionality of foods.

Apple Academic Press

Market: Food Science

May 2019: 229 x 152: 324pp

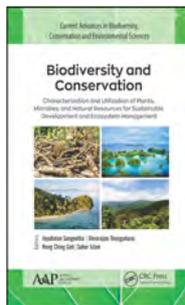
Hb: 978-1-771-88786-1: **£124.00**

eBook: 978-0-429-02928-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887861](http://www.crcpress.com/9781771887861)

## Biodiversity and Conservation

Characterization and Utilization of Plants, Microbes and Natural Resources for Sustainable Development and Ecosystem Management



Edited by **Jeyabalan Sangeetha**, **Devarajan Thangadurai**, **Hong Ching Goh** and **Saher Islam**

This volume provides an enlightening and pragmatic approach to preserving biological diversity by gathering a wide range of peer-reviewed scientific content from biodiversity researchers and conservators from around the world. It brings comprehensive knowledge and information on the present status of conservation of biological diversity including floral, faunal, and microbial diversity. A detailed account of recent trends in conservation and applications under changing climate conditions, focusing mainly on agriculturally and industrially important microbes and their sustainable utilization, is presented as well.

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Market: Ecology

January 2019: 229 x 152: 290pp

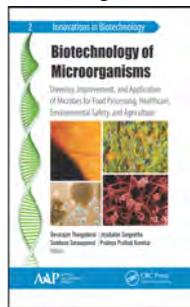
Hb: 978-1-771-88748-9: **£116.00**

eBook: 978-0-429-42579-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887489](http://www.crcpress.com/9781771887489)

## Biotechnology of Microorganisms

Diversity, Improvement, and Application of Microbes for Food Processing, Healthcare, Environmental Safety, and Agriculture



Edited by **Jeyabalan Sangeetha, Devarajan Thangadurai, Somboon Tanasupawat and Pradnya Pralhad Kanekar**

Microbial biotechnology is an important contributor to global business, especially in agriculture, environment, healthcare and medicine, food, and chemical industries. This volume provides an exciting interdisciplinary journey through the rapidly changing backdrop of invention in microbial biotechnology, covering a range to topics, including microbial properties and characterization, cultivation and production strategies, and applications in healthcare, bioremediation, nanotechnology, and more.

Apple Academic Press

**Market:** Microbiology

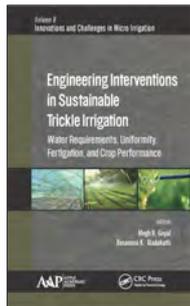
January 2019: 235 x 156: 372pp

Hb: 978-1-771-88747-2: **£124.00**

eBook: 978-0-429-43411-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887472](http://www.crcpress.com/9781771887472)

## Engineering Interventions in Sustainable Trickle Irrigation



Edited by **Megh R. Goyal**, University of Puerto Rico, Mayaguez, USA and **Basamma K. Aladakatti**, Maharana Pratap University of Agriculture and Technology (MPUAT), Udaipur, India

*Series: Innovations in Agricultural & Biological Engineering*

This new volume, *Engineering Interventions in Sustainable Trickle Irrigation: Irrigation Requirements and Uniformity, Fertigation, and Crop Performance*, presents valuable research that evaluates crop water and fertigation requirements, examines optimum irrigation and fertigation scheduling, and analyzes the performance of agricultural crops under micro irrigation. With an interdisciplinary perspective, this volume addresses the urgent need to explore and investigate the current shortcomings and challenges of water resources engineering, especially in micro

irrigation engineering.

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**Market:** Agriculture

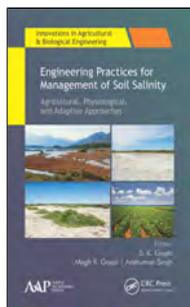
April 2018: 229 x 152: 370pp

Hb: 978-1-771-88601-7: **£124.00**

eBook: 978-1-315-18424-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886017](http://www.crcpress.com/9781771886017)

## Engineering Practices for Management of Soil Salinity



Edited by **S. K. Gupta, Megh R. Goyal**, Point Pleasant, New Jersey, USA and **Anshuman Singh**

*Series: Innovations in Agricultural & Biological Engineering*

This volume, *Engineering Practices for Management of Soil Salinity*, explores and conveys the latest information on emerging technologies in the management of abiotic salt stress and their field applications. It brings together experts from various disciplines (academia, technology, and engineering) to provide the latest information and knowledge on this important challenge.

Apple Academic Press

**Market:** soil science

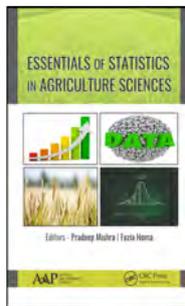
September 2018: 235 x 156: 420pp

Hb: 978-1-771-88676-5: **£139.00**

eBook: 978-1-351-17108-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886765](http://www.crcpress.com/9781771886765)

## Essentials of Statistics in Agriculture Sciences



Edited by **Pradeep Mishra and Zoia Homa**

Here is an introductory text presenting some of the basic concepts of statistical tools, specifically as applied to the statistics of agriculture and allied fields. An understanding of the basics, logic, and theory of statistics is very essential for agricultural researchers for dealing with the interpretation of data. This volume covers basic statistics, design of experiments, concepts of sampling techniques, time series, inference outlines, and other topics in an easy-to-understand manner and is aimed at students and researchers with little or no mathematical background.

Apple Academic Press

**Market:** Agriculture

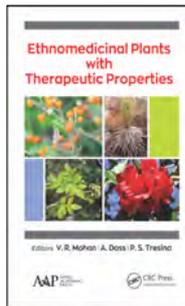
February 2019: 235 x 156: 578pp

Hb: 978-1-771-88752-6: **£139.00**

eBook: 978-0-429-42576-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887526](http://www.crcpress.com/9781771887526)

## Ethnomedicinal Plants with Therapeutic Properties



Edited by **V.R. Mohan, A. Doss and P.S. Tresina**

This volume provides detailed information on locally important medicinal plants, discusses the pharmacological properties of selected medicinal plants, and looks at the phytodrug aspects of selected plants. In 24 important chapters, the volume covers ethnomedicine, pharmacology, and pharmacognosy of selected plants. This volume highlights recent scientific evidence of therapeutic properties of traditionally used medicinal plants in relation to clinical outcomes and remedies for promotion of human well-being. The authors have endeavored to convey the therapeutic knowledge of ethnomedicinal plants clearly and concisely.

Apple Academic Press

**Market:** Alternative Medicine

January 2019: 235 x 156: 448pp

Hb: 978-1-771-88709-0: **£131.00**

eBook: 978-0-429-48776-7

\* For full contents and more information, visit: [www.crcpress.com/9781771887090](http://www.crcpress.com/9781771887090)

## Global Biodiversity

4 Volume Set



Edited by **T. Pullaiah**

This new four-volume set, *Global Biodiversity*, provides a wealth of insightful information on the biodiversity of selected nations around the world. The volumes provide informative summaries of the available data on both wild and cultivated plants, wild and domesticated animals, and microbes of the different nations selected.

Apple Academic Press

**Market:** Botany

December 2018: 235 x 156: 1836pp

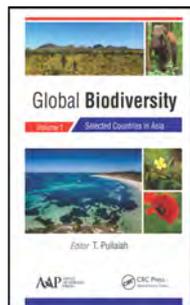
Hb: 978-1-771-88751-9: **£500.00**

eBook: 978-0-429-43384-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887519](http://www.crcpress.com/9781771887519)

## Global Biodiversity

Volume 1: Selected Countries in Asia



Edited by **T. Pullaiah**

*Global Biodiversity, Volume 1: Selected Countries in Asia* provides insightful information on the biodiversity of selected countries of Asia. It summarizes the available data on both wild and cultivated plants, wild and domesticated animals, and microbes of the different nations.

Apple Academic Press

**Market:** Agriculture

January 2019: 235 x 156: 534pp

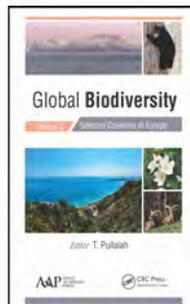
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eBook: 978-0-429-48774-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887076](http://www.crcpress.com/9781771887076)

## Global Biodiversity

Volume 2: Selected Countries in Europe



Edited by **T. Pullaiah**

*Global Biodiversity, Volume 2: Selected Countries in Europe* provides insightful information on the biodiversity of selected countries of Europe. It summarizes the available data on both wild and cultivated plants, wild and domesticated animals, and microbes of the different nations.

Apple Academic Press

**Market:** Agriculture

January 2019: 235 x 156: 496pp

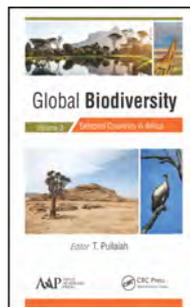
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\* For full contents and more information, visit: [www.crcpress.com/9781771887175](http://www.crcpress.com/9781771887175)

## Global Biodiversity

Volume 3: Selected Countries in Africa



Edited by **T. Pullaiah**

*Global Biodiversity, Volume 3: Selected Countries in Africa* looks at the biodiversity of selected countries of Africa, providing a rich resource of biodiversity information on countries in different parts of Africa. The volume discusses and summarizes the available information on both wild and cultivated plants, wild and domesticated animals, and the variety of microbes of the different nations.

Apple Academic Press

**Market:** Botany

January 2019: 235 x 156: 434pp

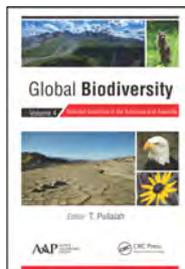
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eBook: 978-0-429-46980-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887229](http://www.crcpress.com/9781771887229)

## Global Biodiversity

Volume 4: Selected Countries in the Americas and Australia



Edited by **T. Pullaiah**

This fourth volume in the new multi-volume set *Global Biodiversity* is a rich resource on the biodiversity of a selection of countries in the Americas and in Australia. Chapters explore both wild and cultivated plants, wild and domesticated animals, and the variety of microbes of the countries of Bolivia, Brazil, Canada, Costa Rica, Cuba, Ecuador, Honduras, Mexico, Australia, Paraguay, the United States, and Venezuela.

Apple Academic Press

**Market:** Botany

January 2019: 235 x 156: 574pp

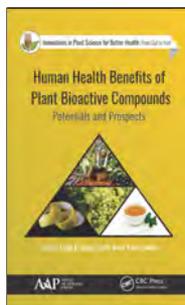
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eBook: 978-0-429-43363-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887502](http://www.crcpress.com/9781771887502)

## Human Health Benefits of Plant Bioactive Compounds

Potentials and Prospects



Edited by **Megh R. Goyal, Hafiz Ansar and Rasul Suleria**

*Human Health Benefits of Plant Bioactive Compounds: Potentials and Prospects* focuses on the importance of functional foods and their secondary metabolites for human health, presenting new insights with scientific evidence on the use of functional foods in the treatment of certain diseases. The plants covered and their bioactive compounds are easily accessible and are believed to be effective with fewer side effects in comparison with modern drugs in the treatment of different diseases.

Apple Academic Press

**Market:** Botany

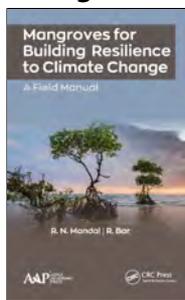
March 2019: 235 x 156: 409pp

Hb: 978-1-771-88739-7: **£124.00**

eBook: 978-0-429-45791-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887397](http://www.crcpress.com/9781771887397)

## Mangroves for Building Resilience to Climate Change



Edited by **R.N. Mandal and R. Bar**

This book provides a comprehensive volume on mangroves, with information accessible to both botany professionals and students. It provides an easy method to identify mangroves and to distinguish different species. What is a mangrove and what are the criteria needed for mangroves are explained, along with explanations of distinctions among major mangroves, mangrove associates, mangrove halophytes, and back mangals. Over 150 photos and illustrations are provided. The volume also covers a range of other topics, including habitats and climatic conditions, morphological and reproductive features, how climate change is affecting mangroves and methods of mitigation and conservation.

Apple Academic Press

**Market:** Botany

December 2018: 229 x 152: 342pp

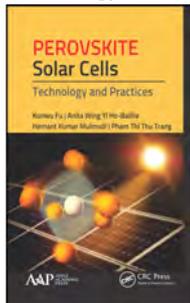
Hb: 978-1-771-88716-8: **£116.00**

eBook: 978-0-429-48778-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887168](http://www.crcpress.com/9781771887168)

## Perovskite Solar Cells

Technology and Practices



Kunwu Fu, Anita Ho-Baillie, Hemant Kumar Mulmudi and Pham Thi Thu Trang

The increasing use of metal halide perovskites as light harvesters has stunned the photovoltaic community. The book covers the basics and provides up-to-date research in the field of perovskite photovoltaics—a fast trending branch of the thin film photovoltaic generation. This comprehensive handbook provides a broad and overall picture of perovskite solar cells (PSCs), starting with the history of development and revolution of PSCs. The authors then delve into electron-transporting materials, hole-transporting materials, and lead-free alternatives. An important chapter on tandem solar cells is also included.

Apple Academic Press

**Market:** Renewable Energy

February 2019: 229 x 152: 299pp

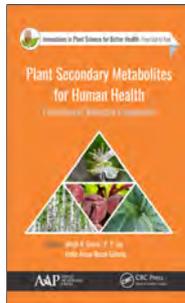
Hb: 978-1-771-88728-1: **£116.00**

eBook: 978-0-429-46974-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887281](http://www.crcpress.com/9781771887281)

## Plant Secondary Metabolites for Human Health

Extraction of Bioactive Compounds



Edited by Megh R. Goyal, P. P. Joy and Hafiz Ansar Rasul Suleria

This new volume deals with recent research in the medical and nutrition sciences, natural products, and health-promoting foods that work to reduce the risk of diseases while enhancing overall well-being. Plant-based functional foods are known to contain compounds (also referred to as phytochemicals) in the leaves, stems, flowers, and fruits that help to promote human health. The volume explores extraction of bioactive compounds from plants, plant-based drugs, and innovative use of plant based drugs for human health.

Apple Academic Press

**Market:** Botany

March 2019: 235 x 156: 331pp

Hb: 978-1-771-88766-3: **£124.00**

eBook: 978-0-429-42532-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887663](http://www.crcpress.com/9781771887663)

## Plant Biotechnology, Two-Volume Set



Edited by Bishun Deo Prasad, Bihar Agricultural University, India, Sangita Sahni, Point Pleasant, New Jersey, USA, Prasant Kumar, Point Pleasant, New Jersey, USA and Mohammed Wasim Siddiqui, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India

This new two-volume set, Plant Biotechnology, provides a plethora of current knowledge on new as well as fresh approaches that are necessary to address biological problems

in plant food production. The volumes provide an informative tour of plant biotechnology, covering the basics of biotechnology to recent advances, taking a thorough look at applications as well. The editors have brought together a respected group of contributors who address the most recent techniques and their applications in plant biotechnology.

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**Market:** Plant Science

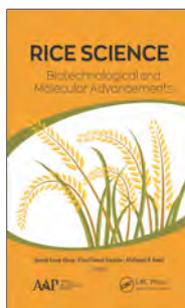
January 2018: 235 x 156: 1148pp

Hb: 978-1-771-88582-9: **£223.00**

eBook: 978-1-315-21309-5

\* For full contents and more information, visit: [www.crcpress.com/9781771885829](http://www.crcpress.com/9781771885829)

## Rice Science: Biotechnological and Molecular Advancements



Edited by Deepak Kumar Verma, Indian Institute of Technology, West Bengal, India, Prem Prakash Srivastav, Indian Institute of Technology, Kharagpur, India and Altafhusain B. Nadaf

This book addresses the recent biotechnological and molecular tools and techniques that are utilized to increase rice production. It will inform industry professionals such as engineers and technologists, academics, and others who are involved in the fields of agricultural and plant science on the most recent developments. It is a valuable reference for individuals engaged in microbiology research as well as educators and their students.

Apple Academic Press

**Market:** Agriculture & Agronomy

December 2018: 235 x 156: 354pp

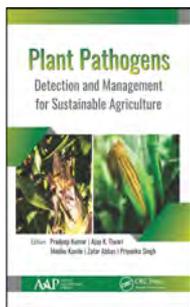
Hb: 978-1-771-88692-5: **£131.00**

eBook: 978-1-351-13658-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886925](http://www.crcpress.com/9781771886925)

## Plant Pathogens

Detection and Management for Sustainable Agriculture



Edited by Pradeep Kumar, Ajay K. Tiwari, Madhu Kamle, Zafar Abbas and Priyanka Singh

*Plant Pathogens: Detection and Management for Sustainable Agriculture* addresses the most critical issues in the management of emerging diseases throughout the world. Experts in plant pathology from internationally renowned institutes share their research and examine key literature on vital issues in pathogen disease diagnosis and management. They look at both traditional pathology as well as new and advanced biotechnological and molecular diagnosis approaches.

Apple Academic Press

**Market:** Botany

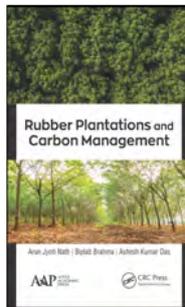
June 2019: 229 x 152: 401pp

Hb: 978-1-771-88788-5: **£124.00**

eBook: 978-0-429-05721-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887885](http://www.crcpress.com/9781771887885)

## Rubber Plantations and Carbon Management



Arun Jyoti Nath, Biplab Brahma and Ashesh Kumar Das

In *Rubber Plantations and Carbon Management*, the authors explore the ecology of rubber plantations in the context of carbon management under a scenario of our changing climate. The authors provide an in-depth study of the carbon stock and sequestration potentiality of rubber plantations. The volume also provides information on a biomass estimating model that can be used in future study of non-harvesting biomass estimation for a variety of plants. Topics in the volume address ecosystem biomass carbon losses through clear felling management systems, ecosystem carbon sequestration, and fine root dynamics in carbon balance under a rubber plantation management system.

Apple Academic Press

**Market:** Agriculture

May 2019: 229 x 152: 201pp

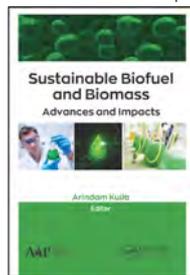
Hb: 978-1-771-88783-0: **£116.00**

eBook: 978-0-429-02349-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887830](http://www.crcpress.com/9781771887830)

## Sustainable Biofuel and Biomass

Advances and Impacts



Edited by **Arindam Kuila**

Biofuel production from waste biomass is increasingly being focused on due to several advantages of lignocellulosic biomass, such as availability in abundance from several sources, cost-effectiveness, little competition with food sources, etc. This new volume, *Sustainable Biofuel and Biomass: Advances and Impacts*, provides an abundance of in-depth information on many types of biofuels from lignocellulosic biomass and also describes biomass sources and their availability for biofuel production.

Apple Academic Press

**Market:** Energy

June 2019: 235 x 156: 387pp

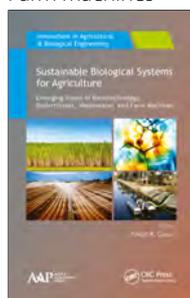
Hb: 978-1-771-88807-3: **£131.00**

eBook: 978-0-429-26509-9

\* For full contents and more information, visit: [www.crcpress.com/9781771888073](http://www.crcpress.com/9781771888073)

## Sustainable Biological Systems for Agriculture

Emerging Issues in Nanotechnology, Biofertilizers, Wastewater, and Farm Machines



Edited by **Megh R. Goyal**, Point Pleasant, New Jersey, USA

*Series: Innovations in Agricultural & Biological Engineering*

*Sustainable Biological Systems for Agriculture: Emerging Issues in Nanotechnology, Biofertilizers, Wastewater, and Farm Machines* explores and introduces the use of nanotechnology, biofertilizers, and design of farm machines in agriculture. The contributions are from India, Africa and the USA; the chapters emphasize sustainable solutions for the enhancement of agriculture processes. The volume provides a wealth of information on new and emerging issues in this interdisciplinary field.

Apple Academic Press

**Market:** Agriculture

May 2018: 229 x 152: 410pp

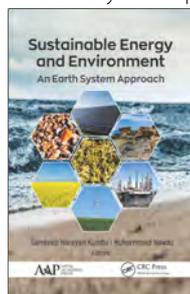
Hb: 978-1-771-88614-7: **£124.00**

eBook: 978-1-315-16526-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886147](http://www.crcpress.com/9781771886147)

## Sustainable Energy and Environment

An Earth System Approach



Edited by **Sandeep Narayan Kundu** and **Muhammad Nawaz**

*Sustainable Energy and Environment: An Earth System Approach* provides a holistic understanding of earth, energy, and the environment through a careful selection of invited chapters. The book looks at Earth from the perspective of a livable planet and elaborates on surface and subsurface processes and the various energy cycles where energy is transformed and stored in the various spheres. The chapters discuss the interactions between the different parts of Earth—how energy is exchanged between the atmosphere, hydrosphere, biosphere, and geosphere, and how impacts it the environment in which we live.

Apple Academic Press

**Market:** Earth Science

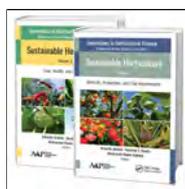
February 2019: 229 x 152: 340pp

Hb: 978-1-771-88763-2: **£124.00**

eBook: 978-0-429-43010-7

\* For full contents and more information, visit: [www.crcpress.com/9781771887632](http://www.crcpress.com/9781771887632)

## Sustainable Horticulture, 2 Volume Set



Edited by **Various**

This timely two-volume compendium addresses the most important topics facing horticulture around the world today. Volume 1 outlines the contemporary trends in sustainable horticulture in particular, covering topics on crop diversity, species variability and conservation strategies, production technology, tree architecture management, plant propagation and nutrition management, organic farming, and new dynamics in breeding and marketing of horticulture crops. Volume 2 covers

research trends in sustainable horticulture that include postharvest management and processed food production from horticulture crops, crop protection and plant health management, and horticulture for human health.

Apple Academic Press

**Market:** Crop Science

July 2018: 235 x 156: 750pp

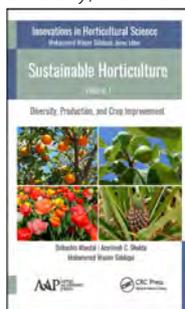
Hb: 978-1-771-88649-9: **£231.00**

eBook: 978-1-315-14958-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886499](http://www.crcpress.com/9781771886499)

## Sustainable Horticulture, Volume 1

Diversity, Production, and Crop Improvement



Edited by **Debashis Mandal**, Department of Horticulture, Aromatic and Medicinal Plants, Mizoram University, Aizawl, India, **Amrithesh C. Shukla**, Department of Botany, University of Lucknow, India and **Mohammed Wasim Siddiqui**, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India

*Series: Innovations in Horticultural Science*

*Sustainable Horticulture, Volume 1: Diversity, Production, and Crop Improvements* outlines the contemporary trends in sustainable horticulture research in particular, covering topics on crop diversity, species variability and conservation strategies, production technology, tree architecture management, plant propagation and nutrition management, organic farming, and new dynamics in breeding and marketing of horticulture crops.

Apple Academic Press

**Market:** Agriculture & Agronomy

September 2018: 235 x 156: 468pp

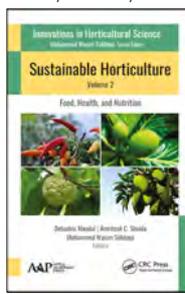
Hb: 978-1-771-88646-8: **£124.00**

eBook: 978-1-315-14793-2

\* For full contents and more information, visit: [www.crcpress.com/9781771886468](http://www.crcpress.com/9781771886468)

## Sustainable Horticulture, Volume 2

Food, Health, and Nutrition



Edited by **Debashis Mandal**, Department of Horticulture, Aromatic and Medicinal Plants, Mizoram University, Aizawl, India, **Amrithesh C. Shukla**, Department of Botany, University of Lucknow, India and **Mohammed Wasim Siddiqui**, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India

*Sustainable Horticulture, Volume 2: Food, Health, and Nutrition* addresses some of the most important topics facing horticulture around the world today. This volume, part of the two-volume compendium, focuses on research trends in sustainable horticulture that include postharvest management and processed food production from horticulture crops, crop protection and plant health management, and horticulture for

human health and nutrition.

Apple Academic Press

**Market:** Crop Science

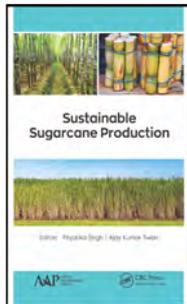
August 2018: 235 x 156: 418pp

Hb: 978-1-771-88647-5: **£124.00**

eBook: 978-1-315-14799-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886475](http://www.crcpress.com/9781771886475)

## Sustainable Sugarcane Production



Edited by **Priyanka Singh** and **Ajay Kumar Tiwari**

This new volume addresses these issues and provides a comprehensive account of the major advancements in sugarcane research. The book is compilation of recent achievements in sugarcane development and cultivation. It covers a number of improvements made in cane and sugar yield using both conventional and new biotechnological approaches by agricultural scientists and researchers. The comprehensive coverage includes sustainable sugarcane cultivation, development, and management of sugarcane production, covering farming and biotechnology, entomology, pathology, breeding, physiology, biotechnology, agronomy, seed production, and more.

Apple Academic Press

**Market:** Crop Science

March 2018: 235 x 156: 426pp

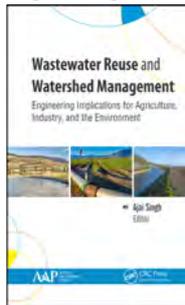
Hb: 978-1-771-88702-1: **£131.00**

eBook: 978-1-351-04776-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887021](http://www.crcpress.com/9781771887021)

## Wastewater Reuse and Watershed Management

Engineering Implications for Agriculture, Industry, and the Environment



Edited by **Ajai Singh**

The editor states that more than 75-80% of the wastewater we produce goes back to nature without being properly treated, leading to pollution and all sorts of negative health and productivity consequences. Topics cover a wide selection of research, including molluscs as a tool for river health assessment, flood risk modeling, biological removal of toxins from groundwater, saline water intrusion into coastal areas, urban drainage simulations, rainwater harvesting, irrigation topics, and more.

Apple Academic Press

**Market:** Waste & Recycling

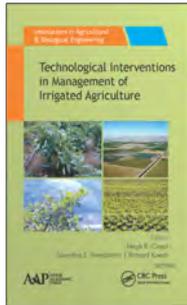
January 2019: 235 x 156: 490pp

Hb: 978-1-771-88746-5: **£124.00**

eBook: 978-0-429-43398-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887465](http://www.crcpress.com/9781771887465)

## Technological Interventions in Management of Irrigated Agriculture



Edited by **Megh R. Goyal**, Point Pleasant, New Jersey, USA, **Susmitha S. Nambuthiri**, Point Pleasant, New Jersey, USA and **Richard Koech**, Point Pleasant, New Jersey, USA

*Series: Innovations in Agricultural & Biological Engineering*

This book offers solutions to address agricultural water management challenges in today's water-scarce areas of the world. The authors present studies on farmer-friendly irrigation scheduling methods, model-based analysis of crop water requirements, ways to optimize surface irrigation systems, and hydraulic design and management of surface water systems. It also highlights ways to improve soil properties by taking into account spatial, temporal, and spectral variability in soil properties. It covers new research on soil and water productivity of vegetables under water-stressed areas, application of coir

geotextiles, and the role of biofertilizers in controlling soil degradation.

Apple Academic Press

**Market:** Agriculture

February 2018: 235 x 156: 288pp

Hb: 978-1-771-88592-8: **£124.00**

eBook: 978-1-315-20430-7

\* For full contents and more information, visit: [www.crcpress.com/9781771885928](http://www.crcpress.com/9781771885928)

## Wild Edible Underutilized Plants

Nutritional, Antinutritional, and Nutraceutical Aspects

Edited by **V. R. Mohan**, **P. S. Tresina** and **A. Doss**

This volume explores the role of wild plants in human nutrition. It emphasizes the importance of these plants and explores their relevance to sustainable agriculture, biodiversity, and public health in different agro-ecological regions. It discusses the nutritional aspects of wild edible plants to explore their value as a source of vitamins, antioxidants, fiber, minerals, and other nutrients and elaborates on the anti-nutritional elements of these plants, providing a comprehensive overview of their utility.

Apple Academic Press

April 2019: 229 x 152: 251pp

Hb: 978-1-771-88771-7: **£124.00**

eBook: 978-0-429-02302-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887717](http://www.crcpress.com/9781771887717)

## The Vegetable Pathogen

Ecology, Disease Mechanism, and Management

Edited by **Mohammad Ansar** and **Abhijeet Ghatak**

Provides an overview of the multitude of pathogens that plague vegetables in various conditions as well as the growing concerns associated with these phytopathogens. Variability in vegetable pathogens is a critical issue, particularly in changing environments, as it presents challenges to accurate diagnoses and proper management. This book focuses on the diverse ecology of phytopathogens, covering the varying disease categories (acute, chronic, and emerging), the mechanisms involved in disease development, pathogen variability, and disease management. The book also discusses the preharvest and postharvest challenges that arise due to these phytopathogens.

Apple Academic Press

**Market:** Crop Science

May 2019: 229 x 152: 568pp

Hb: 978-1-771-88776-2: **£139.00**

eBook: 978-0-429-02299-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887762](http://www.crcpress.com/9781771887762)

## Applied Chemistry and Chemical Engineering, 5-Volume Set



Edited by **A. K. Haghi**, Canadian Research and Development Center of Sciences and Cultures (CRDCSC), Montreal, Quebec, Canada, **Devrim Balköse**, Izmir Polytechnic Institute, Turkey, **Omari V. Mukbaniani**, Iv. Javakishvili Tbilisi State University (TSU), Georgia, **Andrew G. Mercader**, **Lionello Pogliani**, Point Pleasant, New Jersey, USA, **Francisco Torrens**,

Universitat de València, Spain, **Eduardo A. Castro**, **Chin Hua Chia** and **Ana Cristina Faria Ribeiro**, Point Pleasant, New Jersey, USA

This new five-volume set brings together innovative research, new concepts, and novel developments in applied chemistry and chemical engineering. It covers a vast array of topics, with the volumes covering: mathematical and analytical techniques; principles, methodology, and evaluation methods; interdisciplinary approaches to theory and modeling with applications; experimental techniques and methodical developments; and research methodologies in modern chemistry and applied science.

Apple Academic Press

Market: Chemistry

January 2018: 229 x 152: 1790pp

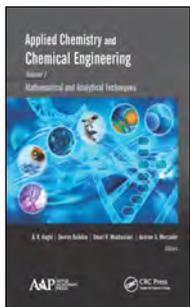
Hb: 978-1-771-88594-2: **£539.00**

eBook: 978-1-315-19758-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885942](http://www.crcpress.com/9781771885942)

## Applied Chemistry and Chemical Engineering, Volume 1

Mathematical and Analytical Techniques



Edited by **A. K. Haghi**, **Devrim Balköse**, **Omari V. Mukbaniani** and **Andrew G. Mercader**

This new book brings together innovative research, new concepts, and novel developments in the application of informatics tools for applied chemistry and computer science. It presents a modern approach to modeling and calculation and also looks at experimental design in applied chemistry and chemical engineering. The volume discusses the developments of advanced chemical products and respective tools to characterize and predict the chemical material properties and behavior.

Apple Academic Press

Market: Chemistry

January 2018: 235 x 156: 316pp

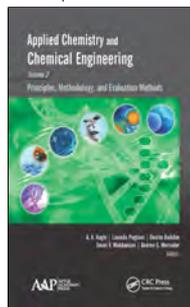
Hb: 978-1-771-88515-7: **£99.00**

eBook: 978-1-771-88516-4

\* For full contents and more information, visit: [www.crcpress.com/9781771885157](http://www.crcpress.com/9781771885157)

## Applied Chemistry and Chemical Engineering, Volume 2

Principles, Methodology, and Evaluation Methods



Edited by **A. K. Haghi**, **Lionello Pogliani**, **Devrim Balköse**, **Omari V. Mukbaniani** and **Andrew G. Mercader**

This book covers many important aspects of applied chemistry and chemical engineering, focusing on three main aspects: principles, methodology and evaluation methods. It presents a selection of chapters on recent developments of theoretical, mathematical, and computational conceptions, as well as chapters on modeling and simulation of specific research themes covering applied chemistry and chemical engineering.

Apple Academic Press

Market: Chemistry

April 2018: 235 x 156: 370pp

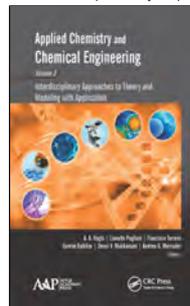
Hb: 978-1-771-88558-4: **£99.00**

eBook: 978-1-771-88559-1

\* For full contents and more information, visit: [www.crcpress.com/9781771885584](http://www.crcpress.com/9781771885584)

## Applied Chemistry and Chemical Engineering, Volume 3

Interdisciplinary Approaches to Theory and Modeling with Applications



Edited by **A. K. Haghi**, **Lionello Pogliani**, **Francisco Torrens**, **Devrim Balköse** and **Omari V. Mukbaniani**

This volume provides a collection of models illustrating the power and richness of the mathematical sciences in supplying insight into the operation of important real-world systems. The first part of the book discusses the general components of the modeling process and the evolutionary nature of successful model building in the electrospinning process. Part 2 of the book presents a selection of special topics on issues in applied chemistry and chemical engineering, including nanocomposite coating processes by electrocodeposition method, entropic factors conformational interactions, and the application of artificial neural network and meta-heuristic algorithms.

Apple Academic Press

Market: Chemistry

April 2018: 235 x 156: 390pp

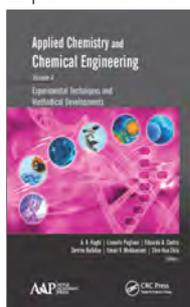
Hb: 978-1-771-88566-9: **£99.00**

eBook: 978-1-771-88567-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885669](http://www.crcpress.com/9781771885669)

## Applied Chemistry and Chemical Engineering, Volume 4

Experimental Techniques and Methodical Developments



Edited by **A. K. Haghi**, **Lionello Pogliani**, **Eduardo A. Castro**, **Devrim Balköse**, **Omari V. Mukbaniani** and **Chin Hua Chia**

This timely volume provides an overview of new methods and presents experimental research in applied chemistry using modern approaches. Each chapter describes the principle of the respective method as well as the detailed procedures of experiments with examples of actual applications and then goes on to demonstrate the advantage and disadvantages of each physical technique. Thus, readers will be able to apply the concepts as described in the book to their own experiments.

Apple Academic Press

Market: Chemistry

April 2018: 235 x 156: 396pp

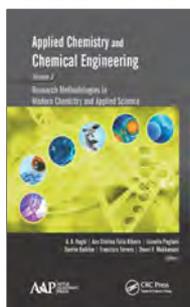
Hb: 978-1-771-88587-4: **£124.00**

eBook: 978-1-315-20763-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885874](http://www.crcpress.com/9781771885874)

## Applied Chemistry and Chemical Engineering, Volume 5

Research Methodologies in Modern Chemistry and Applied Science



Edited by **A. K. Haghi**, **Ana Cristina Faria Ribeiro**, **Lionello Pogliani**, **Devrim Balköse**, **Francisco Torrens** and **Omari V. Mukbaniani**

This volume is designed to fulfill the requirements of scientists and engineers who wish to be able to carry out experimental research in chemistry and applied science using modern methods. Each chapter describes the principle of the respective method, as well as the detailed procedures of experiments with examples of actual applications.

Apple Academic Press

Market: Chemistry

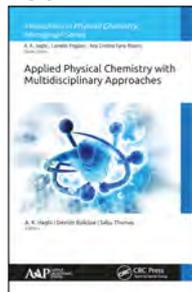
January 2018: 235 x 156: 370pp

Hb: 978-1-771-88593-5: **£124.00**

eBook: 978-1-315-19761-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885935](http://www.crcpress.com/9781771885935)

## Applied Physical Chemistry with Multidisciplinary Approaches



Edited by **A. K. Haghi**, Canadian Research and Development Center of Sciences and Cultures (CRDCSC), Montreal, Quebec, Canada, **Devrim Balköse**, Izmir Polytechnic Institute, Turkey and **Sabu Thomas**, Point Pleasant, New Jersey, USA

*Series: Innovations in Physical Chemistry*

Presenting illustrative case studies, highlighting technological applications, and explaining theoretical and foundational concepts, this book is an important reference source on the key concepts for modern technologies and optimization of new processes in physical chemistry. This volume combines up-to-date research findings and relevant theoretical frameworks on applied chemistry, materials, and chemical engineering.

Apple Academic Press

**Market:** Chemistry

May 2018: 235 x 156: 438pp

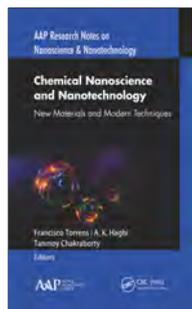
Hb: 978-1-771-88606-2: **£124.00**

eBook: 978-1-315-16941-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886062](http://www.crcpress.com/9781771886062)

## Chemical Nanoscience and Nanotechnology

New Materials and Modern Techniques



Edited by **Francisco Torrens**, **A. K. Haghi** and **Tanmoy Chakraborty**

*Series: AAP Research Notes on Nanoscience and Nanotechnology*

Provides practical research on new methodologies and applications in chemical nanotechnology. It also includes small-scale nanotechnology related projects with potential applications in chemistry and nanotechnology. The contributions range from new methods to novel applications of existing methods to gain understanding of the material and/or structural behavior of new and advanced systems.

Apple Academic Press

**Market:** Materials Science

May 2019: 229 x 152: 301pp

Hb: 978-1-771-88774-8: **£124.00**

eBook: 978-0-429-39825-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887748](http://www.crcpress.com/9781771887748)

## Chemical Science and Engineering Technology

Perspectives on Interdisciplinary Research



Edited by **Devrim Balköse**, Izmir Polytechnic Institute, Turkey, **Ana Cristina Faria Ribeiro**, Point Pleasant, New Jersey, USA, **A. K. Haghi**, Canadian Research and Development Center of Sciences and Cultures (CRDCSC), Montreal, Quebec, Canada, **Suresh C. Ameta**, PAHER University, Udaipur, India and **Tanmoy Chakraborty**, Manipal University, Jaipur, India

One of the major areas of emphasis in the field of in chemical science and engineering technology in recent years has been *interdisciplinary research*, a trend that promises new insights and innovations rooted in cross-disciplinary collaboration. This book provides a selection of chapters on interdisciplinary research in chemical science and engineering technology, taking a conceptual, and practical approach. The book includes case studies and supporting technologies and also explains the conceptual thinking behind current uses and potential uses not yet implemented. International experts with countless years of experience lend this volume credibility.

Apple Academic Press

**Market:** Computational and Theoretical Chemistry

January 2019: 229 x 152: 396pp

Hb: 978-1-771-88705-2: **£124.00**

eBook: 978-1-351-04832-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887052](http://www.crcpress.com/9781771887052)

## Chemical Technology and Informatics in Chemistry with Applications



Edited by **Alexander V. Vakhruhev**, Izhevsk State Technical University, Russia, **Omari V. Mukbaniani**, Iv. Javakishvili Tbilisi State University (TSU), Georgia and **Heru Susanto**, Indonesian Institute of Sciences and Tunghai University, Taichung, Taiwan

*Series: Innovations in Physical Chemistry*

This new volume, *Chemical Technology and Informatics in Chemistry with Applications*, reflects the huge breadth and diversity in research and the application of industrial and engineering chemistry and cheminformatics. The first section of the book focuses on new insights in engineering chemistry while the second part chemical informatics looks at the promising future and novel approaches in this emerging field that has vast implications for industrial and pharmaceutical

applications.

Apple Academic Press

**Market:** Physical Chemistry

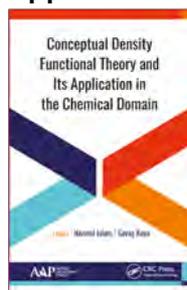
January 2019: 229 x 152: 350pp

Hb: 978-1-771-88666-6: **£124.00**

eBook: 978-1-351-24745-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886666](http://www.crcpress.com/9781771886666)

## Conceptual Density Functional Theory and Its Application in the Chemical Domain



Edited by **Nazmul Islam**, Point Pleasant, New Jersey, USA and **Savas Kaya**

In this book, new developments based on conceptual density functional theory (CDFT) and its applications in chemistry are discussed. It also includes discussion of some applications in corrosion and conductivity and synthesis studies based on CDFT. The electronic structure principles—such as the electronegativity equalization principle, the hardness equalization principle, the electrophilicity equalization principle, and the nucleophilicity equalization principle, along studies based on these electronic structure principles—are broadly explained.

Apple Academic Press

**Market:** Computational & Theoretical Chemistry

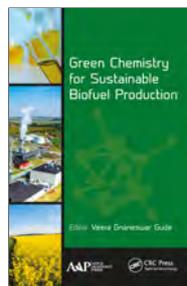
July 2018: 229 x 152: 404pp

Hb: 978-1-771-88665-9: **£124.00**

eBook: 978-0-203-71139-2

\* For full contents and more information, visit: [www.crcpress.com/9781771886659](http://www.crcpress.com/9781771886659)

## Green Chemistry for Sustainable Biofuel Production



Edited by **Veera Ganeswar Gude**

This important volume addresses biofuel feedstock challenges and potential and renewable fuels from carbon sources; process intensification and green chemistry through microwave irradiation, hydrodynamic cavitation, hydrothermal processes, and using ionic liquids; evaluation of nonconventional and emerging sustainable feedstock, such as microalgae, oleaginous microorganisms from wastewater sludge, and biorefinery configurations using bioelectrochemical systems as central technology; and energy-efficiency analyses, techno-economic aspects and life-cycle impacts, and inventories of various biofuel production processes.

Apple Academic Press

**Market:** Energy & Clean Technology

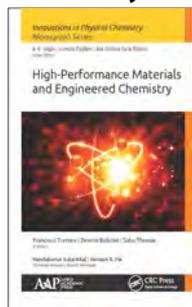
May 2018: 235 x 156: 592pp

Hb: 978-1-771-88639-0: **£139.00**

eBook: 978-1-315-09935-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886390](http://www.crcpress.com/9781771886390)

## High-Performance Materials and Engineered Chemistry



Edited by **Francisco Torrens**, Universitat de València, Spain, **Devrim Balköse**, Izmir Polytechnic Institute, Turkey and **Sabu Thomas**, Point Pleasant, New Jersey, USA

Series: *Innovations in Physical Chemistry*

This volume brings together innovative research, new concepts, and novel developments in the application of new tools for chemical and materials engineers. It contains significant research, reporting new methodologies and important applications in the fields of chemical engineering as well as the latest coverage of chemical databases and the development of new methods and efficient approaches for chemists. This authoritative reference source provides the latest scholarly research on the use of applied concepts to enhance the current trends and productivity in chemical engineering.

Apple Academic Press

Market: Chemistry

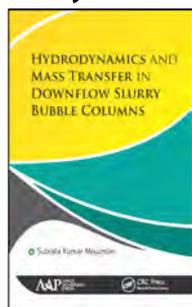
March 2018: 235 x 156: 400pp

Hb: 978-1-771-88598-0: £124.00

eBook: 978-1-315-18786-0

\* For full contents and more information, visit: [www.crcpress.com/9781771885980](http://www.crcpress.com/9781771885980)

## Hydrodynamics and Mass Transfer in Downflow Slurry Bubble Columns



Subrata Kumar Majumder

Slurry bubble column reactors are intensively used as a multiphase reactor in the chemical, biochemical, and petrochemical industries for carrying out reactions and mass transfer operations in which a gas, made up of one or several reactive components, comes into contact or reacts with a liquid. This new volume, *Hydrodynamics and Mass Transfer in Downflow Slurry Bubble Columns*, focuses on hydrodynamics in the downflow gas interacting slurry reactor (DGISR) and its industrial applications. The book provides comprehensive descriptions of the hydrodynamic and mass transfer characteristics of downflow gas interacting slurry bubble column reactor

Apple Academic Press

Market: Chemistry

August 2018: 229 x 152: 244pp

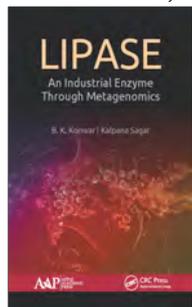
Hb: 978-1-771-88673-4: £116.00

eBook: 978-1-351-24986-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886734](http://www.crcpress.com/9781771886734)

## Lipase

An Industrial Enzyme Through Metagenomics



B.K. Konwar, Point Pleasant, New Jersey, USA and Kalpana Sagar, Delhi University, India

This new volume, *Lipase: An Industrial Enzyme Through Metagenomics*, considers the industrial demand for new sources of lipases with different catalytic characteristics that stimulate the growth and development isolation of new strains. The volume narrates the challenging metagenomic approach with the isolation of the lipase gene, its cloning into *Escherichia coli*, culture of the recombinant bacteria, and extraction and assessment of the lipase enzyme.

Apple Academic Press

Market: Pharmaceutical Science

May 2018: 229 x 152: 214pp

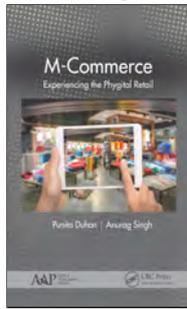
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Apple Academic Press

Market: Information Technology

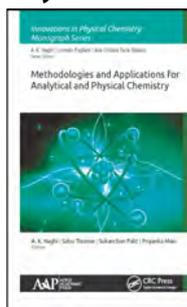
January 2019: 229 x 152: 397pp

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eBook: 978-0-429-48773-6

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## Methodologies and Applications for Analytical and Physical Chemistry



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Apple Academic Press

Market: Chemistry

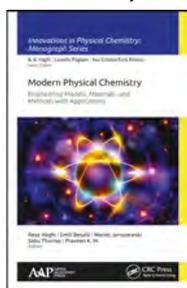
July 2018: 235 x 156: 376pp

Hb: 978-1-771-88621-5: £124.00

eBook: 978-1-315-15953-9

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Series: *Innovations in Physical Chemistry*

This volume brings together innovative research, new concepts, and novel developments in the application of new tools for chemical engineers. It presents significant research, reporting on new methodologies and important applications in the field of chemical engineering.

Apple Academic Press

Market: Physical Chemistry

September 2018: 229 x 152: 488pp

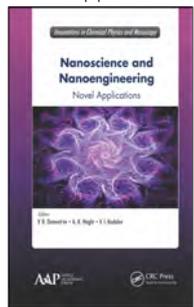
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eBook: 978-1-315-14311-8

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Novel Applications



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polymeric materials and different material modification, including by super small quantities of metal/carbon nanocomposites.

Apple Academic Press

**Market:** Nanotechnology & Mesoscale Physics

January 2019: 235 x 156: 358pp

Hb: 978-1-771-88696-3: **£124.00**

eBook: 978-1-351-13878-9

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Apple Academic Press

**Market:** Chemistry

May 2019: 229 x 152: 1479pp

Hb: 978-1-771-88780-9: **£385.00**

eBook: 978-0-367-07782-2

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Explains and explores the important concepts from various areas within the nanosciences. This volume focuses on structural nanochemistry and contains 50 concise yet comprehensive entries from world-renowned scholars, alphabetically organizing a multitude of essential basic and advanced concepts, ranging from algebraic chemistry to new energy technology, from the bondonic theory of chemistry to spintronics, and from fractal dimension and kinetics to quantum dots and tight binding—and much more.

Apple Academic Press

**Market:** Chemistry

May 2019: 229 x 152: 491pp

Hb: 978-1-771-88777-9: **£131.00**

eBook: 978-0-429-02293-7

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This volume explains and explores the basic and advanced modern concepts in multidisciplinary chemistry with a specific focus on the design and control of nanotechnology by structural and reactive topology. With 46 entries from eminent international scientists and scholars, the volume spans concepts from A-to-Z—from entries on the atom-bond connectivity index to the Zagreb indices, from connectivity to vapor phase epitaxy, and from fullerenes to topological reactivity—and much more. The definitions within the text are accompanied by brief but comprehensive explicative essays as well as figures, tables, etc., providing a holistic understanding of the concepts presented.

Apple Academic Press

**Market:** Chemistry

May 2019: 229 x 152: 484pp

Hb: 978-1-771-88778-6: **£131.00**

eBook: 978-0-429-02294-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887786](http://www.crcpress.com/9781771887786)

## New Frontiers in Nanochemistry: Concepts, Theories, and Trends

Volume 3: Sustainable Nanochemistry

Edited by **Mihai V. Putz**

Explains and explores the essential concepts in the nanosciences, focusing on increasing awareness of sustainable nanochemistry, meaning the social and economic impact of nanochemistry, in order to mitigate ecological resource depletion and to promote the exploration of nature as a resource for future benefits. This volume contains 34 entries contributed by renowned international scientists and scholars, covering topics such as anti-HIV agents, ecotoxicology, solar cells and photovoltaic phenomena, spectral-SAR, and more—alphabetically organized and accompanied by equations, figures, and brief letters in order to emphasize the potential applications of the concepts discussed.

Apple Academic Press

**Market:** Chemistry

May 2019: 229 x 152: 504pp

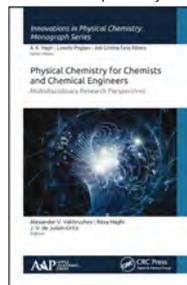
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Multidisciplinary Research Perspectives



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these novel materials and processes are integrated into today's functioning manufacturing industry

Apple Academic Press

**Market:** Bioprocessing

September 2018: 229 x 152: 360pp

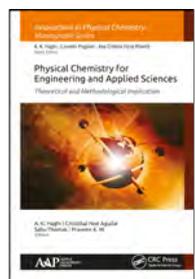
Hb: 978-1-771-88655-0: **£124.00**

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## Physical Chemistry for Engineering and Applied Sciences

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Apple Academic Press

Market: Chemistry

August 2018: 235 x 156: 430pp

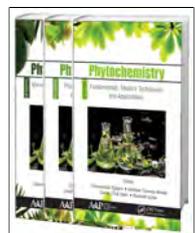
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Volume 2: Pharmacognosy, Nanomedicine, and Contemporary Issues;  
Volume 3: Marine Sources, Industrial Applications, and Recent Advances



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Apple Academic Press

Market: Biochemistry

December 2018: 235 x 156: 1728pp

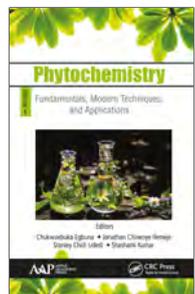
Hb: 978-1-771-88762-5: **£385.00**

eBook: 978-0-429-42627-8

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## Phytochemistry

Volume 1: Fundamentals, Modern Techniques, and Applications



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*Phytochemistry, Volume 1: Fundamentals, Modern Techniques, and Applications*, the first of this three-volume set, provides comprehensive coverage of a wide range of topics in phytochemistry. With chapters from professional specialists from key institutions around the world, the volume starts with an introduction to phytochemistry and details the fundamentals. Part II discusses the state-of-the-art modern methods and techniques in phytochemical research, while Part III provides an informative overview of computational phytochemistry and its applications. Part IV presents novel research findings in the discovery of drugs that will be effective in the treatment of

diseases.

Apple Academic Press

Market: Biochemistry

January 2019: 235 x 156: 658pp

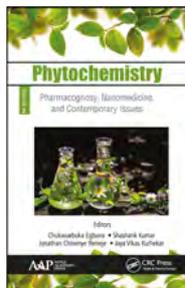
Hb: 978-1-771-88759-5: **£131.00**

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## Phytochemistry

Volume 2: Pharmacognosy, Nanomedicine, and Contemporary Issues



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This book is part of the three-volume set on phytochemistry that presents new developments in pharmacognosy, ethnomedicine, ethnobotany, herbal medicine, complementary and alternative medicine, nanomedicine, nanopharmacology, and ethnoveterinary practices. This new volume provides chapters that comprehensively review a selection of important recent advances in ethnopharmacology and alternative and complementary medicines. It also presents many chapters on the medicinal potential of phytochemicals in the treatment and management of various diseases, such as cancer, diabetes, diabetic nephropathy, autoimmune diseases, neurological disorders, male infertility, etc.

Apple Academic Press

Market: Biochemistry

December 2018: 235 x 156: 592pp

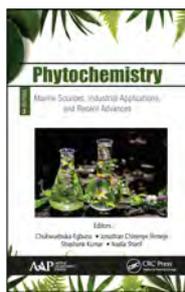
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eBook: 978-0-429-42619-3

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Apple Academic Press

Market: Biochemistry

January 2019: 235 x 156: 478pp

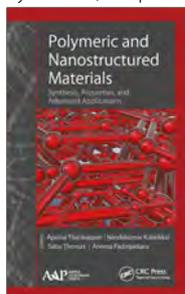
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Synthesis, Properties, and Advanced Applications



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*Polymeric and Nanostructured Materials: Synthesis, Properties, and Advanced Applications* provide in-depth knowledge and recent research on polymers and nanostructured materials from synthesis to advanced applications. Leading researchers from industry, academia, government and private research institutions

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Apple Academic Press

Market: Polymetric Materials and Plastics

December 2018: 235 x 156: 380pp

Hb: 978-1-771-88644-4: **£124.00**

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Apple Academic Press

**Market:** Chemistry

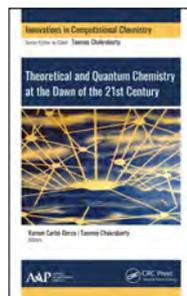
May 2019: 229 x 152: 298pp

Hb: 978-1-771-88784-7: **£124.00**

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**Market:** Computational and Theoretical Chemistry

July 2018: 235 x 156: 696pp

Hb: 978-1-771-88682-6: **£154.00**

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Apple Academic Press

**Market:** Chemistry

April 2019: 229 x 152: 334pp

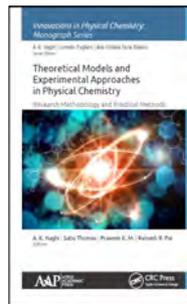
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Apple Academic Press

**Market:** Physical Chemistry

October 2018: 229 x 152: 422pp

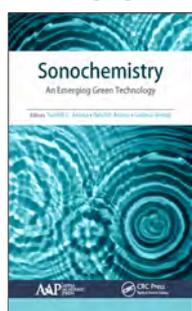
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## Sonochemistry

An Emerging Green Technology



Edited by **Suresh C. Ameta**, PAHER University, Udaipur, India, **Rakshit Ameta**, PAHER University, Debari, India and **Garima Ameta**

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Apple Academic Press

**Market:** Chemistry

July 2018: 229 x 152: 388pp

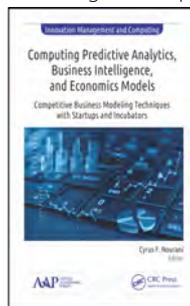
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Apple Academic Press

**Market:** Computation

March 2019: 229 x 152: 275pp

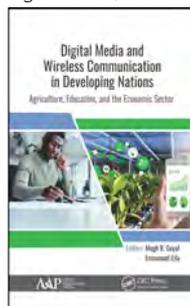
Hb: 978-1-771-88729-8: **£116.00**

eBook: 978-0-429-46546-8

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## Digital Media and Wireless Communication in Developing Nations

Agriculture, Education, and the Economic Sector



Edited by **Megh R. Goyal** and **Emmanuel Eilu**

*Digital Media and Wireless Communication in Developing Nations: Agriculture, Education, and the Economic Sector* explores how digital media and wireless communication, especially mobile phones and social media platforms, offer concrete opportunities for developing countries to transform different sectors of their economies. The volume focuses on the agricultural, economic, and education sectors. The chapter authors, mostly from Africa and India, provide a wealth of information on recent innovations, the opportunities they provide, challenges faced, and the direction of future research in digital media and wireless communication to leverage transformation in developing countries.

Apple Academic Press

**Market:** Wireless Communication

May 2019: 229 x 152: 310pp

Hb: 978-1-771-88785-4: **£116.00**

eBook: 978-0-429-02931-8

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## Electronics and Communication Engineering: Applications and Innovations



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This volume addresses a selection of important current advancements in the electronics and communication engineering fields, focusing signal processing, chip design and networking technology. Specifically, the volume looks at new research and trends in microwave and antennas communication systems, very-large-scale integration, embedded systems, and intelligent control and signal processing systems.

Apple Academic Press

**Market:** Analog Communications

January 2019: 229 x 152: 355pp

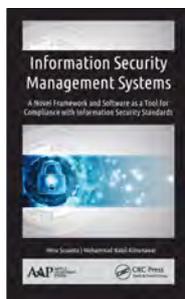
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## Information Security Management Systems

A Novel Framework and Software as a Tool for Compliance with Information Security Standard



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This new volume looks at information security management system standards, risk management associated with information security, and information security awareness within an organization. The authors aim to improve the overall ability of organizations to participate, forecast, and actively assess their information security circumstances. They have constructed a novel security framework (ISF) and subsequently used this framework to develop software called Integrated Solution Modeling (ISM), a semi-automated system that will greatly help organizations comply with ISO 27001 faster and cheaper than other existing methods.

Apple Academic Press

**Market:** Information Technology

June 2018: 229 x 152: 302pp

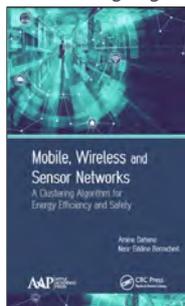
Hb: 978-1-771-88577-5: **£95.00**

eBook: 978-1-315-23235-5

\* For full contents and more information, visit: [www.crcpress.com/9781771885775](http://www.crcpress.com/9781771885775)

## Mobile, Wireless and Sensor Networks

A Clustering Algorithm for Energy Efficiency and Safety



Edited by **Amine Dahane**, Intelligent Systems Research Laboratory, University of Sciences and Technology of Oran, Algeria and **Nasr-Eddine Berrached**, PhD Professor, Electronics Department, University of Science and Technology of Oran, Algeria

In this book, the authors address clustering approaches for mobile wireless sensor networks (WSNs) to prolong the battery life of the individual sensors and the network lifetime. The platform presented here aims at showing the feasibility, the flexibility, and the reduced cost using the authors' approach. The authors demonstrate the performance of the proposed algorithms that contribute to the familiarization of the learners in the field of WSNs.

Apple Academic Press

**Market:** Networking Communications

November 2018: 229 x 152: 265pp

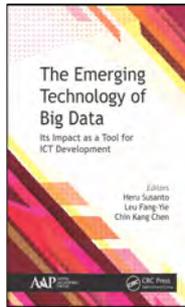
Hb: 978-1-771-88679-6: **£124.00**

eBook: 978-1-351-19075-6

\* For full contents and more information, visit: [www.crcpress.com/9781771886796](http://www.crcpress.com/9781771886796)

## The Emerging Technology of Big Data

Its Impact as a Tool for ICT Development



Edited by **Heru Susanto**, Indonesian Institute of Sciences and Tunghai University, Taichung, Taiwan, **Fang-Yie Leu** and **Chin Kang Chen**

Big Data is now highly regarded and accepted as a useful tool to help organizations manage their data and information effectively and efficiently. This new volume, *The Emerging Technology of Big Data: Its Impact as a Tool for ICT Development*, looks at the new technology that has emerged to meet the growing need and demand and studies the impact of Big Data in several areas of today's society, including social media, business process re-engineering, science, e-learning, higher education, business intelligence, and green computing.

Apple Academic Press

**Market:** Data Mining and Knowledge Discovery

December 2018: 229 x 152: 374pp

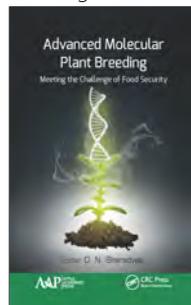
Hb: 978-1-771-88675-8: **£124.00**

eBook: 978-1-351-24125-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886758](http://www.crcpress.com/9781771886758)

## Advanced Molecular Plant Breeding

Meeting the Challenge of Food Security



Edited by **D.N. Bharadwaj**

This new volume provides a better understanding of molecular plant breeding in order to boost the quality of agriculture produce, to increase crop yields and to provide nutritious food for everyone by 2050. Scientists believe the challenge can be met by implementing new and improved techniques of quantitative trait inheritance in plant breeding. Integrating genomics and molecular biology into appropriate tools and methodologies can help to create genetically engineered plants, such as by using biotic and abiotic stress tolerance, molecular markers, '-omics' technology, and genome editing.

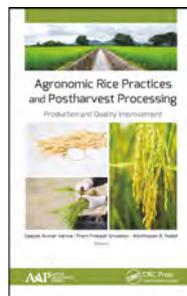
Apple Academic Press

**Market:** Botany & Plant Science  
November 2018: 235 x 156: 700pp  
Hb: 978-1-771-88664-2: **£139.00**  
eBook: 978-0-203-71065-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886642](http://www.crcpress.com/9781771886642)

## Agronomic Rice Practices and Postharvest Processing

Production and Quality Improvement



Edited by **Deepak Kumar Verma, Prem Prakash Srivastav and Altafhusain B. Nadaf**

This volume addresses three important agricultural aspects of rice: physical characteristics, physico-chemical characteristics of rice, and the organoleptic aspects of rice. Divided into four parts, the book first looks at recent trends and advances for higher production and quality improvement of rice, which covers climate-resilient agricultural practices. The book looks at climatic effects, relative performance, and constraints in direct seeded versus transplanted rice of Asia, constraints in temperate rice culture, and interventions to mitigate the challenges, along with recent advances and trends in system of rice intensification (SRI).

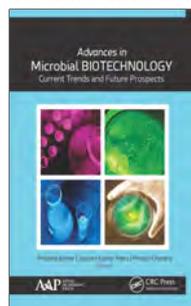
Apple Academic Press

**Market:** Agriculture  
December 2018: 235 x 156: 378pp  
Hb: 978-1-771-88712-0: **£131.00**  
eBook: 978-0-429-48858-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887120](http://www.crcpress.com/9781771887120)

## Advances in Microbial Biotechnology

Current Trends and Future Prospects



Edited by **Pradeep Kumar, PhD., Jayanta Kumar Patra and Pranjal Chandra**

This new volume, *Advances in Microbial Biotechnology: Current Trends and Future Prospects*, focuses on the application of microorganisms for several purposes: for plant protection and improvement, for environmental remediation purposes, and for the improvement of human health.

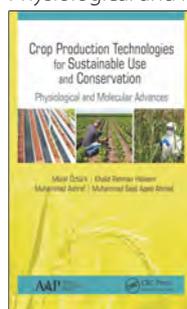
Apple Academic Press

**Market:** Biotechnology  
September 2018: 235 x 156: 574pp  
Hb: 978-1-771-88667-3: **£149.00**  
eBook: 978-1-351-24891-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886673](http://www.crcpress.com/9781771886673)

## Crop Production Technologies for Sustainable Use and Conservation

Physiological and Molecular Advances



Edited by **Munir Ozturk, Khalid Rehman Hakeem and Muhammad Ashraf**

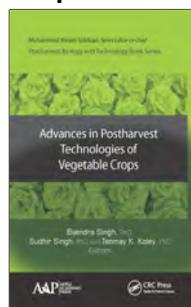
*Crop Production Technologies for Sustainable Use and Conservation: Physiological and Molecular Advances* presents an abundance of research on important and new production technologies for the successful sustainable production of major crops. The volume covers most of the major crops used the production of food, sugar, and commercial fiber.

Apple Academic Press

**Market:** Agriculture  
March 2019: 235 x 156: 458pp  
Hb: 978-1-771-88726-7: **£124.00**  
eBook: 978-0-429-46976-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887267](http://www.crcpress.com/9781771887267)

## Advances in Postharvest Technologies of Vegetable Crops



Edited by **Bijendra Singh**, Indian Institute of Vegetable Research, Varanasi, Uttar Pradesh, India and **Sudhir Singh**, Indian Institute of Vegetable Research, Varanasi, Uttar Pradesh, India

*Series: Postharvest Biology and Technology*

This book, *Advances in Postharvest Technologies of Vegetable Crops*, presents a selection of innovative postharvest management practices for vegetables. It covers technologies in harvesting, handling, and storage of vegetables, including strategies for low-temperature storage of vegetables, active and smart packaging of vegetables, edible coatings, application of nanotechnology in postharvest technology of vegetable crops, and more. It considers the most of the important areas of vegetable processing while maintaining nutritional quality and

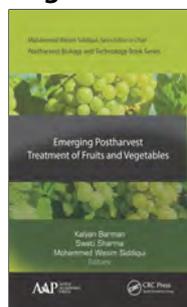
addressing safety issues related to vegetable processing.

Apple Academic Press

**Market:** Agriculture  
May 2018: 235 x 156: 534pp  
Hb: 978-1-771-88619-2: **£139.00**  
eBook: 978-1-315-16102-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886192](http://www.crcpress.com/9781771886192)

## Emerging Postharvest Treatment of Fruits and Vegetables



Edited by **Kalyan Barman, Swati Sharma and Mohammed Wasim Siddiqui**, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India

*Series: Postharvest Biology and Technology*

This volume addresses the demand for the development and application of effective technologies for preservation of perishable food products, particularly fresh fruits and vegetables. The chapters discuss a number of innovative technologies to prolong and enhance postharvest fruits and vegetables. It discusses the use of heat treatments, the effects of various substances and reactions to enhance postharvest (such as calcium, methyl jasmonate, nitric oxide, ozone, polyamines), the use of nanotechnology in the packaging of fresh fruits and

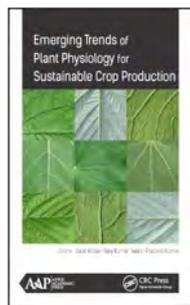
vegetables, biological control of postharvest diseases, and advances in edible coatings and films.

Apple Academic Press

**Market:** Fruit & Vegetable Products  
September 2018: 235 x 156: 386pp  
Hb: 978-1-771-88700-7: **£131.00**  
eBook: 978-1-351-04631-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887007](http://www.crcpress.com/9781771887007)

## Emerging Trends of Plant Physiology for Sustainable Crop Production



Edited by **Zafar Abbas, PhD.**, G. F. College (M. J. P. Rohilkhand University), Shahjahanpur, Uttar Pradesh, India, **Ajay Kumar Tiwari, PhD.** and **Pradeep Kumar, PhD.**

This new volume provides an understanding of the physiological basis of the various plant processes and their underlying mechanisms under fluctuating environments, which is of great importance for sustainable crop production. This book covers the latest information on the physiological basis of plant productivity, including abiotic stress adaptation and management, plant nutrition, climate change and plant productivity, transgenic and functional genomics, and plant growth regulators and their applications.

Apple Academic Press

**Market:** Life Science

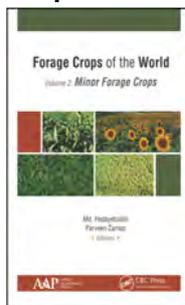
March 2018: 229 x 152: 394pp

Hb: 978-1-771-88636-9: **£124.00**

eBook: 978-1-351-10122-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886369](http://www.crcpress.com/9781771886369)

## Forage Crops of the World, Volume II: Minor Forage Crops



Edited by **Md. Hedayetullah** and **Parveen Zaman**

This new book discusses the importance of fodder production of the minor fodder crops for animals. It focuses on fodder production for the 25 minor forage crops, including non-leguminous perennial forages, leguminous forages, and non-leguminous and non-graminaceous forages. It discusses crop production methodology and agronomic management in a systemic way, providing an abundance of information on each type of forage crop discussed, including preferred soil type, land capability, cropping patterns, climate, and socioeconomic conditions.

Apple Academic Press

**Market:** Agriculture & Agronomy

September 2018: 229 x 152: 356pp

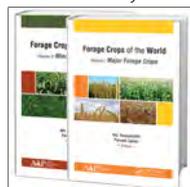
Hb: 978-1-771-88685-7: **£116.00**

eBook: 978-1-351-16728-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886857](http://www.crcpress.com/9781771886857)

## Forage Crops of the World, 2-volume set

Volume I: Major Forage Crops; Volume II: Minor Forage Crops



Edited by **Md. Hedayetullah** and **Parveen Zaman**

This new 2-volume set discusses the importance of fodder production of the minor fodder crops for animals. The volumes focus on fodder production for forage crops, cover 17 major forage crops and 25 minor forage crops. The volumes discuss crop production methodology and agronomic management in a systemic way, providing an abundance of information on each type of forage crop discussed, including preferred soil type, land capability, cropping patterns, climate, and socioeconomic

conditions. They also address pests of the various forage crops, disease management, agroforestry in fodder and forage crops, preservation of forage crops, and forage production and climate change.

Apple Academic Press

**Market:** Agriculture & Agronomy

August 2018: 229 x 152: 620pp

Hb: 978-1-771-88686-4: **£231.00**

eBook: 978-1-351-16724-6

\* For full contents and more information, visit: [www.crcpress.com/9781771886864](http://www.crcpress.com/9781771886864)

## Innovative Packaging of Fruits and Vegetables: Strategies for Safety and Quality Maintenance



Edited by **Mohammed Wasim Siddiqui**, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India, **Mohammed Shafiur Rahman** and **Ali Abas Wani**

*Series: Postharvest Biology and Technology*

This volume addresses the challenges of the short shelf-life of fruits and vegetables. Innovative packaging technologies are the most promising strategies for overcoming these limitations. The book will provide a host of sustainable packaging solutions that deliver protection, branding, consumer attractiveness, and speed to market in a competitive retail environment.

Apple Academic Press

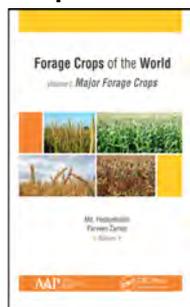
May 2018: 235 x 156: 356pp

Hb: 978-1-771-88597-3: **£131.00**

eBook: 978-1-351-14306-4

\* For full contents and more information, visit: [www.crcpress.com/9781771885973](http://www.crcpress.com/9781771885973)

## Forage Crops of the World, Volume I: Major Forage Crops



Edited by **Md. Hedayetullah** and **Parveen Zaman**

This new book discusses the importance of fodder production of the major fodder crops for animals. It focuses on fodder production for the 17 major forage crops, both non-leguminous perennial forages and leguminous forages. It discusses crop production methodology and agronomic management in a systemic way, providing an abundance of information on each type of forage crop, including preferred soil type, land capability, cropping patterns, climate, and socioeconomic conditions. It addresses pests of leguminous forage crops, disease management of non-leguminous seasonal forages, agroforestry in fodder and forage crops, preservation of forage crops, and forage production and climate change.

Apple Academic Press

**Market:** Agriculture & Agronomy

September 2018: 229 x 152: 402pp

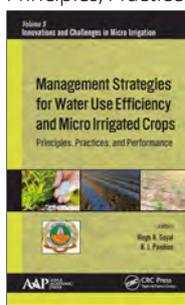
Hb: 978-1-771-88684-0: **£116.00**

eBook: 978-1-351-16736-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886840](http://www.crcpress.com/9781771886840)

## Management Strategies for Water Use Efficiency and Micro Irrigated Crops

Principles, Practices, and Performance



Edited by **Megh R. Goyal** and **B. J. Pandian**

*Series: Innovations and Challenges in Micro Irrigation*

*Management Strategies for Water Use Efficiency and Micro Irrigated Crops* presents new research and technologies for making better use of water resources for agricultural purposes. The chapters focus on better management to improve allocation and irrigation water efficiency and look at performance factors as well. Chapters look at irrigation technology, environmental conditions, and scheduling of water application.

Apple Academic Press

**Market:** Crop Science

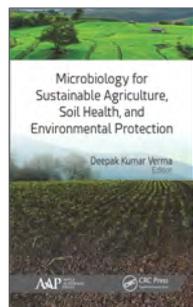
February 2019: 229 x 152: 320pp

Hb: 978-1-771-88791-5: **£131.00**

eBook: 978-0-429-06060-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887915](http://www.crcpress.com/9781771887915)

## Microbiology for Sustainable Agriculture, Soil Health, and Environmental Protection



Edited by **Deepak Kumar Verma**

With contributions from a broad range of experts in the field, this volume, *Microbiology for Sustainable Agriculture, Soil Health, and Environmental Protection*, focuses on important areas of microbiology related to soil and environmental microbiology associated with agricultural importance. The information and research on soil and environmental microbiology presented here seeks to act as a gateway to sustaining and improving agriculture and environmental security.

Apple Academic Press

Market: soil science

November 2018: 235 x 156: 504pp

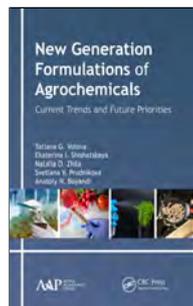
Hb: 978-1-771-88669-7: **£139.00**

eBook: 978-1-351-24706-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886697](http://www.crcpress.com/9781771886697)

## New Generation Formulations of Agrochemicals

Current Trends and Future Priorities



Edited by **Tatiana G. Volova, Ekaterina I. Shishatskaya, Natalia O. Zhila, Svetlana V. Prudnikova and Anatoly N. Boyandin**

This important volume provides new research on the design and application of ecologically safe formulations for protecting cultivated crops against pathogen-causing diseases and weeds—that also provide nitrogen fertilizers at the same time. The authors make a significant contribution to the development and agricultural use of environmentally safe and biodegradable new-generation pesticides with targeted and controlled release of active ingredients. They discuss the problems associated with the use and accumulation of xenobiotics in the biosphere and present highlights of modern trends in the design of new-generation formulations.

Apple Academic Press

Market: Crop Science

January 2019: 235 x 156: 250pp

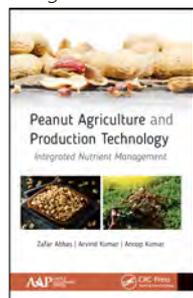
Hb: 978-1-771-88749-6: **£116.00**

eBook: 978-0-429-43361-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887496](http://www.crcpress.com/9781771887496)

## Peanut Agriculture and Production Technology

Integrated Nutrient Management



**Zafar Abbas**, G. F. College (M. J. P. Rohilkhand University), Shahjahanpur, Uttar Pradesh, India, **Arvind Kumar**, Point Pleasant, New Jersey, USA and **Anoop Kumar**, GF College, Shahjahanpur, UP, India

This book focuses on agricultural techniques and integrated nutrient management of peanuts (*Arachis hypogaea* L.). It includes basic and advanced information on production, agrotechniques, and integrated nutrient management of the peanut crop plant. It studies the physiology of the peanut, looking at the proper environmental conditions for optimal growth as well as under various subnormal conditions and explores the methods of nitrogen application as well as the influence of different sowing dates and population densities to harvest its full yield potential. It covers methods to achieve balanced nutrition, including using

organic manures in groundnut farming to enhance yielding ability.

Apple Academic Press

Market: Agriculture

April 2018: 229 x 152: 204pp

Hb: 978-1-771-88613-0: **£116.00**

eBook: 978-1-351-16687-2

\* For full contents and more information, visit: [www.crcpress.com/9781771886130](http://www.crcpress.com/9781771886130)

## Spices

Agrotechniques for Quality Produce



Edited by **Amit Baran Sharangi**, Department of Spices and Plantation Crops, Faculty of Horticulture, BCKV (Agricultural University), Nadia, West Bengal, India, **Suchand Datta** and **Prahlad Deb**  
Series: *Innovations in Horticultural Science*

Indian spices are famous across the globe and have attracted food lovers for ages. With the increasing awareness of health through foods, people are now more conscious about the health and nutraceutical benefits of spices. The past few years have witnessed pioneering research work in this area with various spices. This volume is a comprehensive volume that collects and collates the wisdom of the past and blends it with the technological progress of today. The book is a rich compilation of agrotechniques coupled with background information, research work, and scientific discussion on the basic and applied

aspects on the subject.

Apple Academic Press

Market: Agriculture

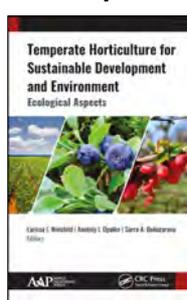
March 2018: 235 x 156: 408pp

Hb: 978-1-771-88635-2: **£124.00**

eBook: 978-1-351-10125-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886352](http://www.crcpress.com/9781771886352)

## Temperate Horticulture for Sustainable Development and Environment



Edited by **Larissa I. Weisfeld**, Point Pleasant, New Jersey, USA, **Anatoly I. Opalko**, Point Pleasant, New Jersey, USA and **Sarra A. Bekuzarova**, North Caucasus Institute of Mountain and Submontane Agriculture, Republic of North Ossetia-Alania, Russia

Ecological and genetic control of plant resistance to unfavorable environmental influences is being carried out all over the world, and new varieties and hybrids of plants are being created, resulting in rich, new information and innovative new methods of cultivation. This new volume explores the vast biotic diversity in horticulture, with a focus on sustainable development in today's deteriorating environment.

Apple Academic Press

Market: Life Science

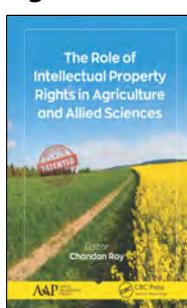
September 2018: 229 x 152: 382pp

Hb: 978-1-771-88668-0: **£124.00**

eBook: 978-1-351-24939-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886680](http://www.crcpress.com/9781771886680)

## The Role of Intellectual Property Rights in Agriculture and Allied Sciences



Edited by **Chandan Roy**

This volume, *The Role of Intellectual Property Rights in Agriculture and Allied Sciences*, provides a basic understanding of the different forms of intellectual property rights in agricultural science. It provides an abundance of information on the use of IP laws in agriculture and allied subjects and their proper implementation in real-life practice. The chapter authors discuss different kinds of IP laws and their current status in developed as well as developing countries throughout the world.

Apple Academic Press

Market: Botany & Plant Science

July 2018: 229 x 152: 354pp

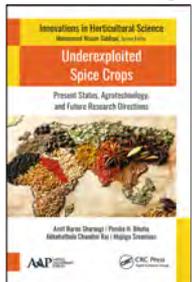
Hb: 978-1-771-88698-7: **£116.00**

eBook: 978-1-351-12528-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886987](http://www.crcpress.com/9781771886987)

## Underexploited Spice Crops

Present Status, Agrotechnology, and Future Research Directions



Amit Baran Sharangi, Pemba H. Bhutia, Akkabathula Chandini Raj and Majjiga Sreenivas

Series: *Innovations in Horticultural Science*

This new volume is a valuable compilation of agrotechniques coupled with background information, research works, and scientific discussions on these spices. It will include in-depth narration on underexploited spice crops as products in influencing present-day the global export market and the renewed interest in these crops throughout the world. The volume deals with the scientific approach of growing underexploited spices with the intention of popularizing them. Separate chapters on the importance of each spice, methods of growing and harvesting, and recent research from around the world along with future strategies are covered.

Apple Academic Press

Market: Crop Science

August 2018: 229 x 152: 334pp

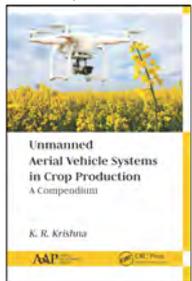
Hb: 978-1-771-88697-0: £124.00

eBook: 978-1-351-13646-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886970](http://www.crcpress.com/9781771886970)

## Unmanned Aerial Vehicle Systems in Crop Production

A Compendium



K. R. Krishna

This volume provides useful detailed reviews of 250 UAVs that examine their usefulness in enhancing profitability, yield, and quality of crop production. The volume goes into great detail about the specifications of each of 250 agricultural drone models covered. These include fixed-wing drones, fixed-wing (hybrid) VTOL helicopters, multi-copters, tilted-wing drones, etc. The reviews compare activities among the UAVs, such as aerial imagery of crops, ability to provide spectral analyses to collect useful data about a crop's growth patterns, and how they can be used to gauge crop canopy temperature (i.e. water stress index), determine grain maturity, and much more.

Apple Academic Press

Market: Crop Science

February 2019: 235 x 156: 612pp

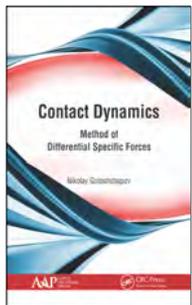
Hb: 978-1-771-88756-4: £139.00

eBook: 978-0-429-42526-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887564](http://www.crcpress.com/9781771887564)



## Contact Dynamics: Methods of Differential Specific Forces



Nikolay Goloshchapov

This new book describes the application of the method of the differential specific forces (MDSF). By using this new method, the solutions to the problems of a dissipative viscoelastic and elastic-plastic contacts between curvilinear surfaces of two solid bodies can be found. The novelty is that the forces of viscosity and the forces of elasticity can be found by an integration of the differential specific forces acting inside an elementary volume of the contact zone. It will be useful in research of contact dynamics of any shape of contacting surfaces and for determining of the dynamic mechanical properties of materials and in the design of wear-resistant elements and coverings.

Apple Academic Press

Market: Tribology

March 2019: 235 x 156: 294pp

Hb: 978-1-771-88683-3: £131.00

eBook: 978-1-351-16652-2

\* For full contents and more information, visit: [www.crcpress.com/9781771886833](http://www.crcpress.com/9781771886833)

## Engineering Technology and Industrial Chemistry with Applications



Edited by Reza K. Haghi, Point Pleasant, New Jersey, USA and Francisco Torrens

Series: *Innovations in Physical Chemistry*

This volume, *Engineering Technology and Industrial Chemistry with Applications*, brings together innovative research, new concepts, and novel developments in the application of new tools for chemical and materials engineers. It provides a collection of innovative chapters on new scientific and industrial research from chemists and chemical engineers at several prestigious institutions. It looks at recent significant research and reports on new methodologies and important applications in the fields of chemical engineering as well as provides coverage of chemical databases, bringing together theory and practical applications.

Apple Academic Press

Market: Physical Chemistry

October 2018: 229 x 152: 338pp

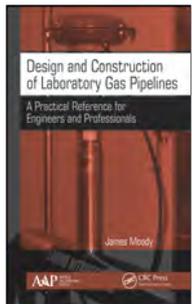
Hb: 978-1-771-88637-6: £124.00

eBook: 978-1-315-10044-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886376](http://www.crcpress.com/9781771886376)

## Design and Construction of Laboratory Gas Pipelines

A Practical Reference for Engineers and Professionals



James Moody

This new volume, *Design and Construction of Laboratory Gas Pipelines: A Practical Reference for Engineers and Professionals*, focuses on design and installation of laboratory gas pipelines. It instructs design engineers, laboratory managers, and installation technicians on how to source the information and specifications they require for the design and installation of laboratory gas systems suitable for their intended use.

Apple Academic Press

Market: Mechanical Engineering

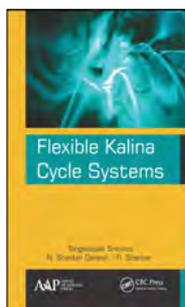
March 2019: 235 x 156: 332pp

Hb: 978-1-771-88723-6: £131.00

eBook: 978-0-429-46973-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887236](http://www.crcpress.com/9781771887236)

## Flexible Kalina Cycle Systems



Tangellapalli Srinivas, N. Shankar Ganesh and R. Shankar

This volume provides a good understanding of the binary fluid system, highlighting new dimensions of the existing Kalina cycle system, a thermodynamic process for converting thermal energy into usable mechanical power. The volume illustrates that providing new flexibility leads to new research outcomes and possible new projects in this field. The information provided in the book simplifies the application of Kalina cycle system with an easy-to-understand and thorough explanation of properties development, processes solutions, sub-system work, and total system work.

Apple Academic Press

Market: Thermodynamics

January 2019: 229 x 152: 362pp

Hb: 978-1-771-88713-7: £124.00

eBook: 978-0-429-48777-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887137](http://www.crcpress.com/9781771887137)

## Engineering Technologies for Renewable and Recyclable Materials



Edited by Jithin Joy, Mahatma Gandhi University, Kottayam, Kerala, India, Maciej Jaroszewski, Point Pleasant, New Jersey, USA, Praveen K.M., Sabu Thomas, Point Pleasant, New Jersey, USA and Reza Haghi, Point Pleasant, New Jersey, USA

Series: *Innovations in Physical Chemistry*

Recycling and reuse of materials is of considerable interest these days. This new resource, *Engineering Technologies for Renewable and Recyclable Materials: Physical-Chemical Properties and Functional Aspects*, focuses on many recent advances in recycling and reuse of materials, outlining basic tools and novel approaches. It covers such important issues as e-waste recycling, bio-mass recycling, vermitechology, recovery of metals, polymer recycling, environmental remediation, waste management, recycling of nanostructured materials, and more. Also included is coverage of new research in the use of laser spectroscopy, pyrolysis, and recycled biomaterials for biomedical applications.

Apple Academic Press

Market: Materials Chemistry

September 2018: 229 x 152: 324pp

Hb: 978-1-771-88653-6: £124.00

eBook: 978-1-315-14715-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886536](http://www.crcpress.com/9781771886536)

## Functionalized Engineering Materials and Their Applications



Edited by Sabu Thomas, Point Pleasant, New Jersey, USA, Nandakumar Kalarikkal, Pious C. V., Zakhia Ahmad and Józef Tadeusz Haponiuk, Gdansk University of Technology, Poland

This book presents a diverse selection of cutting-edge research on the development of polymeric materials and nanomaterials for new and different applications. These include electrical applications, biomedical applications, sensing applications, coating applications, and others. A few chapters dedicated to materials for construction applications are also included. Discussions include the properties, behavior, preparation, processing, and characterization of various polymeric materials, nanomaterials, and their composites. Some of the chapter

authors present theoretical studies of these systems, which can help the readers to develop a better understanding in this area.

Apple Academic Press

Market: Materials Science

September 2018: 235 x 156: 380pp

Hb: 978-1-771-88523-2: £99.00

eBook: 978-1-771-88524-9

\* For full contents and more information, visit: [www.crcpress.com/9781771885232](http://www.crcpress.com/9781771885232)

## Mechanical Engineering for Sustainable Development: State-of-the-Art Research



Edited by C.S.P. Rao, G.Amba Prasad Rao, N. Selvaraj, P.S.C. Bose and V.P. Chandramohan

*Mechanical Engineering for Sustainable Development: State-of-the-Art Research* provides some valuable insight into diverse topics related to mechanical engineering and the state-of-the-art work on sustainable development being carried out throughout the world by budding researchers and scientists. The volume is divided into three sections, covering Machine Design, Materials and Manufacturing, and Thermal Engineering. The work presented is both experimental and numerical (computational/simulation) in nature.

Apple Academic Press  
**Market:** Automotive Engineering  
 January 2019: 235 x 156: 640pp  
 Hb: 978-1-771-88681-9: **£147.00**  
 eBook: 978-1-351-17016-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886819](http://www.crcpress.com/9781771886819)

## Scientific and Technical Terms in Bioengineering and Biological Engineering



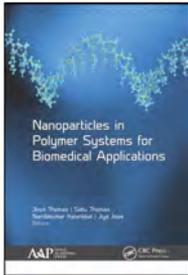
Megh R. Goyal, Point Pleasant, New Jersey, USA

*Series: Innovations in Agricultural & Biological Engineering*  
 This immensely valuable book provides a comprehensive, easy-to-understand, and up-to-date glossary of technical and scientific terms used in the fields of bioengineering and biotechnology, including terms used in agricultural sciences. The volume also includes terms for plants, animals, and humans, making it a unique, complete, and easily accessible reference.

Apple Academic Press  
**Market:** Biotechnology  
 January 2018: 235 x 156: 634pp  
 Hb: 978-1-771-88659-8: **£154.00**  
 eBook: 978-0-203-71143-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886598](http://www.crcpress.com/9781771886598)

## Nanoparticles in Polymer Systems for Biomedical Applications



Edited by Jince Thomas, Sabu Thomas, Nandakumar Kalarikkal and Jiya Jose

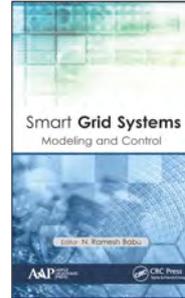
The book presents many of the recent technological and research accomplishments in the area of nanomedicine and nanotechnology. It includes presentations of state of art in the field along with novel approaches in nanomedicine and nanotechnology, and new challenges and opportunities. Also discussed are the different types of nanomedicinal drugs with their production and commercial significance.

Apple Academic Press  
**Market:** Nanobiotechnology  
 January 2019: 229 x 152: 342pp  
 Hb: 978-1-771-88703-8: **£124.00**  
 eBook: 978-1-351-04788-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887038](http://www.crcpress.com/9781771887038)

## Smart Grid Systems

Modeling and Control



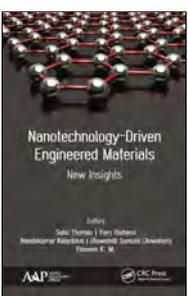
Edited by N. Ramesh Babu, Point Pleasant, New Jersey, USA

*Smart Grid Systems: Modeling and Control* provides a comprehensive discussion that describes the challenges and the future scope of the technologies related to smart grid. It covers a wide range of topics on smart grids, including renewable Energy (solar/wind) penetration to the grid, energy storage, control techniques, energy management, and modeling of smart devices/techniques. The volume will be valuable to academicians, researchers, and practitioners in the field of power system, as well as to students entering this field.

Apple Academic Press  
**Market:** Electrical Engineering  
 June 2018: 229 x 152: 290pp  
 Hb: 978-1-771-88625-3: **£124.00**  
 eBook: 978-1-315-11112-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886253](http://www.crcpress.com/9781771886253)

## Nanotechnology-Driven Engineered Materials



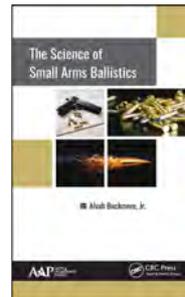
Edited by Sabu Thomas, Nandakumar Kalarikkal, Oluwatobi Samuel Oluwafemi and Praveen K.M.

Nanostructured materials are emerging as a new class of materials exhibiting unique microstructures and enhanced mechanical performance. As a result, these materials have attracted considerable attention in scientific communities all over the world. There is continuous research to facilitate product development, thereby improving product quality and reliability in industry. This volume is devoted to novel architectures at the nano-level with an emphasis on new synthesis and characterization methods.

Apple Academic Press  
**Market:** Nanotechnology  
 September 2018: 229 x 152: 24pp  
 Hb: 978-1-771-88634-5: **£124.00**  
 eBook: 978-1-315-10260-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886345](http://www.crcpress.com/9781771886345)

## The Science of Small Arms Ballistics



Alvah Buckmore, Jr.

This very unique and very different book is a comprehensive study of the science of small arm ballistics—from interior and exterior ballistics to terminal ballistics. The book serves as a manual for both members of academia and members of the recreational shooting community throughout the world. The author defines the science of ballistics by breaking it down into its major and logical categories and then explaining the basic patterns and relationships in a way the reader can understand and use toward the solution of problems, either to design ammunition for a particular gun or a gun for any particular ammunition.

Apple Academic Press  
**Market:** Aerospace Engineering  
 June 2018: 229 x 152: 202pp  
 Hb: 978-1-771-88650-5: **£108.00**  
 eBook: 978-1-315-14720-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886505](http://www.crcpress.com/9781771886505)

## Applied Food Science and Engineering with Industrial Applications



Edited by **Cristóbal Noé Aguilar** and **Elizabeth Carvajal-Millan**

This volume highlights the latest advances and research in the interdisciplinary field of food engineering, emphasizing food science as well as quality assurance. The volume provides detailed technical and scientific background of technologies and their potential applications in food preservation. The volume's broad perspective reflects the expertise of international and interdisciplinary engineers, drawing on that of food technologists, microbiologists, chemists, mechanical engineers, biochemists, geneticists, and others.

Apple Academic Press

**Market:** Food Engineering & Processing

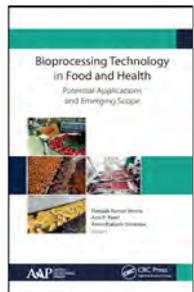
January 2019: 235 x 156: 340pp

Hb: 978-1-771-88706-9: **£124.00**

eBook: 978-1-351-04864-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887069](http://www.crcpress.com/9781771887069)

## Bioprocessing Technology in Food and Health: Potential Applications and Emerging Scope



Edited by **Deepak Kumar Verma**, Indian Institute of Technology, West Bengal, India, **Ami R. Patel** and **Praakash Srivastav**, Indian Institute of Technology, Kharagpur, India

This volume focuses on recent findings, new research trends, and emerging technologies in bioprocessing, making use of microorganisms in the production of food for health and nutritional benefits. The volume looks at some newly emerged bioprocessing technological advances in the functional foods in conjunction their prospective health benefits. It covers recent breakthroughs in food safety in microbial bioprocessing. Chapters discuss spoilage issues, harmful/pathogenic microorganisms, genetically modified microorganisms, stability

and functionality, and potential of food-grade microbes for biodegradation of toxic compounds, such as mycotoxins, pesticides, and polycyclic hydrocarbons.

Apple Academic Press

**Market:** Functional Foods and Nutraceuticals

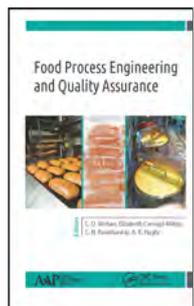
September 2018: 229 x 152: 314pp

Hb: 978-1-771-88688-8: **£124.00**

eBook: 978-1-351-16788-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886888](http://www.crcpress.com/9781771886888)

## Food Process Engineering and Quality Assurance



Edited by **C.O. Mohan**, **Elizabeth Carvajal-Millan**, Research Center for Food and Development (CIAD), Hermosillo, Mexico, **C.N. Ravishankar**, ICAR-Central Institute of Fisheries Technology (CIFT), Cochin, India and **A. K. Haghi**, Canadian Research and Development Center of Sciences and Cultures (CRDSCS), Montreal, Quebec, Canada

This new book, Food Process Engineering and Quality Assurance provides an abundance of valuable new research and studies in novel technologies used in food processing and quality assurance issues of food. The 750-page book gives a detailed technical and scientific background of various food processing technologies that are relevant to the industry. This book looks at advanced materials and techniques used for, among other things, chemical and heat sterilization, advanced packaging, and

monitoring and control, which are essential to the highly automated facilities for the high-throughput production of safe food products.

Apple Academic Press

**Market:** Food Science

February 2018: 235 x 156: 648pp

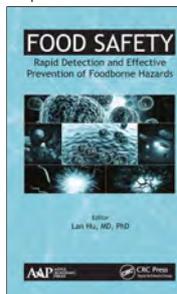
Hb: 978-1-771-88576-8: **£127.00**

eBook: 978-1-351-23296-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885768](http://www.crcpress.com/9781771885768)

## Food Safety

Rapid Detection and Effective Prevention of Foodborne Hazards



Edited by **Lan Hu**, Center for Food Safety and Applied Nutrition (CFSAN), College Park, MD, USA

This new volume, Food Safety: Rapid Detection and Effective Prevention of Foodborne Hazards, focuses on the general concepts, mechanisms, and new applications of analytical and molecular biology techniques for detecting, removing, and preventing chemical and biological hazards from food. Edited by a microbiologist and medical officer with over 20 years of laboratory and research experience in bacteriology, molecular biology, infectious disease, and food safety, and who has trained with the U.S. Food and Drug Administration (FDA), the volume provides an abundance of valuable information on food safety and foodborne hazards in our food and drink.

Apple Academic Press

**Market:** Food Science

July 2018: 229 x 152: 240pp

Hb: 978-1-771-88628-4: **£124.00**

eBook: 978-1-315-10909-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886284](http://www.crcpress.com/9781771886284)

## Handbook of Research on Food Science and Technology

3 Volume Set



Edited by **Monica Chavez-Gonzalez**, **Jose Juan Buenrostro-Figueroa** and **Cristobal N. Aguilar**

This handbook consists of three volumes focusing on food technology and chemistry, food biotechnology and microbiology, and functional foods and nutraceuticals. The volumes highlight new research and current trends in food science and technology, looking at the most recent innovations, emerging technologies, and strategies focusing on taking food

design to sustainable levels.

Apple Academic Press

**Market:** Food Science

December 2018: 229 x 152: 915pp

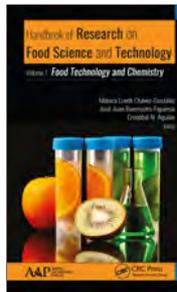
Hb: 978-1-771-88721-2: **£347.00**

eBook: 978-0-429-48781-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887212](http://www.crcpress.com/9781771887212)

## Handbook of Research on Food Science and Technology

Volume 1: Food Technology and Chemistry



Edited by **Monica Chavez-Gonzalez**, **Jose Juan Buenrostro-Figueroa** and **Cristobal N. Aguilar**

The *Handbook of Research in Food Science and Technology* consists of three volumes focusing on food technology and chemistry, food biotechnology and microbiology, and functional foods and nutraceuticals. Volume 1 of the 3-volume set focuses on food technology and chemistry. The chapters examine edible coatings, bioactive compounds, essential oils in active food packaging, food industrial wastes as raw material for nanostructure production, and more.

Apple Academic Press

**Market:** Food Science

December 2018: 229 x 152: 258pp

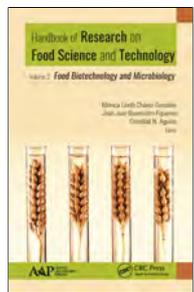
Hb: 978-1-771-88718-2: **£124.00**

eBook: 978-0-429-48785-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887182](http://www.crcpress.com/9781771887182)

## Handbook of Research on Food Science and Technology

Volume 2: Food Biotechnology and Microbiology



Edited by **Monica Lizeth Chavez-Gonzalez, Jose Juan Buenrostro-Figueroa and Cristobal N. Aguilar**

This handbook consists of three volumes focusing on food technology and chemistry, food biotechnology and microbiology, and functional foods and nutraceuticals. The volumes highlight new research and current trends in food science and technology, looking at the most recent innovations, emerging technologies, and strategies focusing on taking food design to sustainable levels. Volume 2 focuses on food biotechnology and microbiology. The chapters examine bioactive compounds in food biotechnology, potential and risks of pigmented-grain corn, technological advances in the production of phytases, phytochemical molecules from food

wastes, control of food-borne pathogen bacteria, and more.

Apple Academic Press

**Market:** Food Science

December 2018: 229 x 152: 246pp

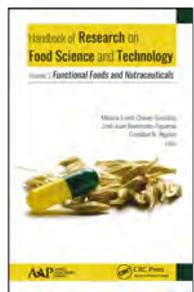
Hb: 978-1-771-88719-9: **£124.00**

eBook: 978-0-429-48783-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887199](http://www.crcpress.com/9781771887199)

## Handbook of Research on Food Science and Technology

Volume 3: Functional Foods and Nutraceuticals



Edited by **Monica Lizeth Chavez-Gonzalez, Jose Juan Buenrostro-Figueroa and Cristobal N. Aguilar**

This handbook consists of three volumes focusing on food technology and chemistry, food biotechnology and microbiology, and functional foods and nutraceuticals. The volumes highlight new research and current trends in food science and technology, looking at the most recent innovations, emerging technologies, and strategies focusing on taking food design to sustainable levels. Volume 3 focuses on functional foods and nutraceuticals. The chapters examine nutraceuticals as treatment for cancer and neurodegenerative diseases, trends in functional food in noncommunicable diseases, synergism in food trends, bioactive peptides, agave fructans as a functional

component in foods, and more.

Apple Academic Press

**Market:** Food Science

December 2018: 229 x 152: 256pp

Hb: 978-1-771-88720-5: **£124.00**

eBook: 978-0-429-48782-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887205](http://www.crcpress.com/9781771887205)

## Innovative Food Science and Emerging Technologies



Edited by **Sabu Thomas, Rajendran Rajakumari, Anne George and Nandakumar Kalarikka**

Innovative Food Science and Emerging Technologies covers many new trends and developments in food science, including preparation, characterization, morphology, properties, recyclability, and advances and challenging opportunities in food science technology. The volume considers food quality, shelf life, and manufacture in conjunction with human nutrition, diet, and health as well as the ever-growing demand for the supply and production of healthier foods.

Apple Academic Press

**Market:** Food Engineering & Processing

October 2018: 235 x 156: 620pp

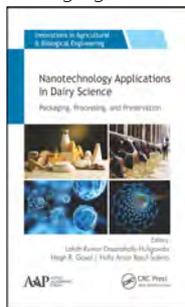
Hb: 978-1-771-88661-1: **£139.00**

eBook: 978-0-203-71140-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886611](http://www.crcpress.com/9781771886611)

## Nanotechnology Applications in Dairy Science

Packaging, Processing, and Preservation



Edited by **Lohith Kumar Dasarahally-Huligowda, Megh R. Goyal and Hafiz Ansar Rasul Suleria**

*Series: Innovations in Agricultural & Biological Engineering*

This new volume is designed to provide new insight into the utilization of nanotechnology in dairy science and food science. It focuses on applications of nanotechnology in packaging and drying of dairy and meat products, nanofiltration use in the dairy industry, and whey processing and dairy encapsulation. In addition, this book will facilitate the necessary understanding of the different aspects and concerns with regard to the new technological advances that nanotechnologies are contributing to the dairy industry. It also addresses several of the challenges that are overcome by the continuing development of nanotechnology applications in the food and dairy industries.

Apple Academic Press

**Market:** Nanobiotechnology

March 2019: 235 x 156: 323pp

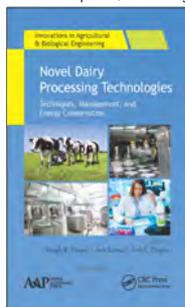
Hb: 978-1-771-88765-6: **£124.00**

eBook: 978-0-429-42537-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887656](http://www.crcpress.com/9781771887656)

## Novel Dairy Processing Technologies

Techniques, Management, and Energy Conservation



Edited by **Megh R. Goyal**, Point Pleasant, New Jersey, USA, **Anit Kumar**, National Institute of Food Technology Entrepreneurship and Management, Kundli, Haryana, India and **Anil K. Gupta**, AG Family Dentistry, LLC, Alexandria, LA, USA

*Series: Innovations in Agricultural & Biological Engineering*

Milk is nature's perfect food (lacking only iron, copper, and vitamin C) and is highly recommended by nutritionists for building healthy bodies. New technologies have emerged in the processing of milk. This new volume focuses on the processing of milk by novel techniques, emphasizing the conservation of energy and effective methods. This book is divided four parts that cover applications of novel processing technologies in the dairy industry; novel drying techniques in

the dairy industry; management systems and hurdles in the dairy industry; and energy conservation and opportunities in the dairy industry.

Apple Academic Press

**Market:** Food Science

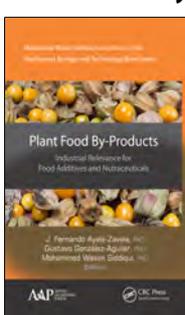
March 2018: 229 x 152: 298pp

Hb: 978-1-771-88612-3: **£124.00**

eBook: 978-1-315-16712-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886123](http://www.crcpress.com/9781771886123)

## Plant Food By-Products



Edited by **J. Fernando Ayala-Zavala, Gustavo González-Aguilar and Mohammed Wasim Siddiqui**

*Series: Postharvest Biology and Technology*

This volume takes examines the advantages of using plant food by-products as food additives and nutraceuticals, turning solid wastes into value-added items. The chapters, written by researchers and professionals working in the plant food industry, look at ways to make effective use of plant by-products by harnessing the power of the antimicrobial and nutraceutical power of plant and herb extracts.

Apple Academic Press

**Market:** Food Engineering

March 2018: 235 x 156: 363pp

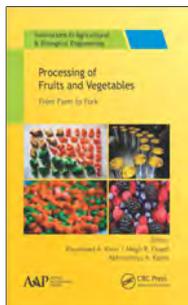
Hb: 978-1-771-88640-6: **£131.00**

eBook: 978-1-315-09933-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886406](http://www.crcpress.com/9781771886406)

## Processing of Fruits and Vegetables

From Farm to Fork



Edited by **Khursheed A. Khan** and **Megh R. Goyal**  
This volume, *Processing of Fruits and Vegetables: From Farm to Fork*, describes in detail various aspects of fruits and vegetable processing. It looks at new and established technology for processing, physical and biochemical properties of fruits and vegetables and their products, challenges of the fruits and vegetables processing industry, and a few other related aspects, such as effect of processing on nutritional content, bioavailability, economic utilization of bio-wastes, and processing byproducts.

Apple Academic Press  
**Market:** Food Science  
January 2019: 235 x 156: 384pp  
Hb: 978-1-771-88708-3: **£124.00**  
eBook: 978-0-429-50577-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887083](http://www.crcpress.com/9781771887083)

## State-of-the-Art Technologies in Food Science

Human Health, Emerging Issues and Specialty Topics



Edited by **Murlidhar Meghwal** and **Megh R. Goyal**, Point Pleasant, New Jersey, USA

*Series: Innovations in Agricultural & Biological Engineering*

There has been a growing interest in the health benefits derived from fruits and vegetables and food products based on them. Many foods contain various phytochemical, flavonoids, fibers, macronutrients and micronutrients, minerals etc., which are very good for health and essential to keep good health. The new volume, *State-of-the-Art Technologies in Food Science: Human Health, Emerging Issues, and Specialty Topics*, provides a global perspective of the current state of food and health research, innovation, and emerging trends. It explores topics of food for better health, including functional foods and nutraceutical foods.

Apple Academic Press  
**Market:** Food Science  
September 2018: 229 x 152: 364pp  
Hb: 978-1-771-88616-1: **£124.00**  
eBook: 978-1-315-16527-1

\* For full contents and more information, visit: [www.crcpress.com/9781771886161](http://www.crcpress.com/9781771886161)

## Research Methodology in Food Sciences

Integrated Theory and Practice



Edited by **C. O. Mohan**, **Elizabeth Carvajal-Millan**, Research Center for Food and Development (CIAD), Hermosillo, Mexico and **C. N. Ravishankar**, ICAR-Central Institute of Fisheries Technology (CIFT), Cochin, India

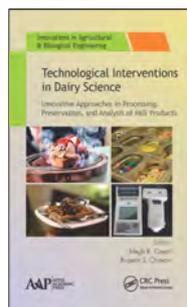
This new book, *Research Methodology in Food Sciences: Integrated Theory and Practice*, is a rich resource on recent research innovations in the field of food processing and food engineering. Chapters are written by eminent researchers in the field of food science and provide in-depth knowledge on the application of engineering aspects in food processing, food packaging, food quality, and food safety.

Apple Academic Press  
**Market:** Food Science  
July 2018: 235 x 156: 376pp  
Hb: 978-1-771-88624-6: **£139.00**  
eBook: 978-1-315-11435-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886246](http://www.crcpress.com/9781771886246)

## Technological Interventions in Dairy Science

Innovative Approaches in Processing, Preservation, and Analysis of Milk Products



Edited by **Rupesh S. Chavan**, Mother Dairy at Junagadh, Gujarat, India and **Megh R. Goyal**, Point Pleasant, New Jersey, USA

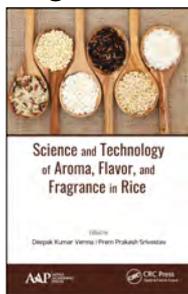
*Series: Innovations in Agricultural & Biological Engineering*

This new volume covers a selection of important novel technological interventions in dairy science, from the physical properties of milk and other milk products to non-thermal processing of milk. It also discusses safety methods in dairy science, which includes cleaning-in-place and techniques to determine adulteration in milk.

Apple Academic Press  
**Market:** Food Science  
February 2018: 229 x 152: 336pp  
Hb: 978-1-771-88609-3: **£124.00**  
eBook: 978-1-315-16940-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886093](http://www.crcpress.com/9781771886093)

## Science and Technology of Aroma, Flavor, and Fragrance in Rice



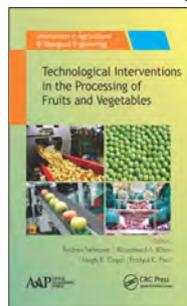
Edited by **Deepak Kumar Verma**, Indian Institute of Technology, West Bengal, India and **Prem Prakash Srivastav**, Indian Institute of Technology, Kharagpur, India

With contributions from a broad range of leading researchers, this book focuses on advances and innovative in rice aroma, flavor, and fragranceresearch. Science and Technology of Aroma, Flavor, and Fragrance in Rice is specially designed to present an abundance of recent research, advances, and innovations in this growing field.

Apple Academic Press  
**Market:** Food Engineering & Processing  
September 2018: 229 x 152: 352pp  
Hb: 978-1-771-88660-4: **£124.00**  
eBook: 978-0-203-71145-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886604](http://www.crcpress.com/9781771886604)

## Technological Interventions in the Processing of Fruits and Vegetables



Edited by **Rachna Sehrawat**, National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Haryana, India, **Khursheed A. Khan**, Mandasaur of Rajmata Vijayaraje Scindia Agriculture University (RVSKVV), Gwalior, India, **Megh R. Goyal**, Point Pleasant, New Jersey, USA and **Prodyut K. Paul**, Point Pleasant, New Jersey, USA

*Series: Innovations in Agricultural & Biological Engineering*

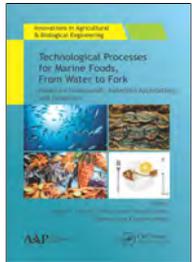
This new volume presents a wide selection of the latest concepts in the fast-changing field of processing of fruits and vegetables (FAV). It provides key information on many new and different techniques used for processing of fruits and vegetables while also exploring the pros and cons of the various methods.

Apple Academic Press  
**Market:** Food Science  
March 2018: 235 x 156: 468pp  
Hb: 978-1-771-88586-7: **£131.00**  
eBook: 978-1-315-20576-2

\* For full contents and more information, visit: [www.crcpress.com/9781771885867](http://www.crcpress.com/9781771885867)

## Technological Processes for Marine Foods, From Water to Fork

Bioactive Compounds, Industrial Applications, and Genomics



Edited by **Megh R. Goyal, Hafiz Ansar Rasul Suleria and Shanmugam Kirubanandan**

Series: *Innovations in Agricultural & Biological Engineering*

This book, *Technological Processes for Marine Foods, From Water to Fork: Bioactive Compounds, Industrial Applications, and Genomics*, looks at the importance of marine foods and their secondary metabolites for human health along with a number of novel processing techniques and applications for marine books. It also provides some recent studies on microbiology and genomics of marine food products.

Apple Academic Press

Market: Food Science

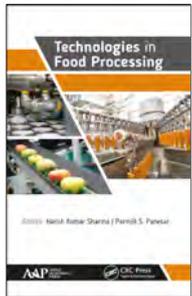
January 2019: 235 x 156: 422pp

Hb: 978-1-771-88758-8: **£124.00**

eBook: 978-0-429-42527-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887588](http://www.crcpress.com/9781771887588)

## Technologies in Food Processing



Edited by **Harish Kumar Sharma and Parmjit S. Panesar**

In this new volume, *Technologies in Food Processing*, experts address the use of different technologies. They look at technology to process foods with ways to preserve the nutrients, eliminate anti-nutrients and toxins, add vitamins and minerals, and reduce waste. The book explores several modern techniques used to preserve the essential nutritional benefits of foods. They search for easier ways to process foods that help to improve the quality of life for individuals.

Apple Academic Press

Market: Food Biotechnology

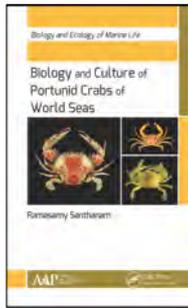
August 2018: 235 x 156: 380pp

Hb: 978-1-771-88651-2: **£124.00**

eBook: 978-1-315-14719-2

\* For full contents and more information, visit: [www.crcpress.com/9781771886512](http://www.crcpress.com/9781771886512)

## Biology and Culture of Portunid Crabs of World Seas



**Ramasamy Santhanam**, Former Dean, Tamilnadu Veterinary & Animal Sciences University, Thoothukudi, India

*Series: Biology and Ecology of Marine Life*

*Biology and Culture of Portunid Crabs of World Seas* provides an abundance of valuable first-hand information about the diversity, biology, ecology culture of the portunid crabs of the world seas. This new volume presents the biology and aquaculture of marine portunid crabs. It covers the biology of commercially important portunid species, presents the profile (habitat, distribution, morphology, food and feeding, reproduction, conservation status, etc.) of about 180 species of the different subfamilies, and much more. It also includes over 275 illustrations, many in color.

Apple Academic Press

**Market:** Marine & Aquatic Science

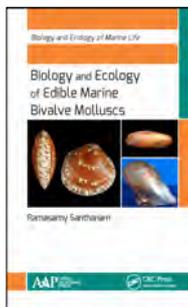
January 2018: 229 x 152: 404pp

Hb: 978-1-771-88590-4: **£131.00**

eBook: 978-1-315-20581-6

\* For full contents and more information, visit: [www.crcpress.com/9781771885904](http://www.crcpress.com/9781771885904)

## Biology and Ecology of Edible Marine Bivalve Molluscs



**Ramasamy Santhanam**, Former Dean, Tamilnadu Veterinary & Animal Sciences University, Thoothukudi, India

*Series: Biology and Ecology of Marine Life*

This comprehensive book on the biology and ecology of edible marine bivalve molluscs covers the biology of edible marine bivalves; profiles about 180 species, providing information on their habitat, distribution, morphology, food and feeding, reproduction, conservation status, etc.; discusses their nutritional values; examines their pharmaceutical values; and looks at their diseases and parasites. This abundance of knowledge is presented in an easy-to-read style with informative illustrations.

Apple Academic Press

**Market:** Marine & Aquatic Science

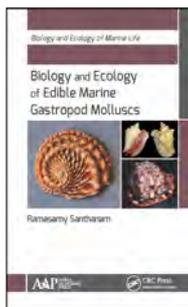
June 2018: 229 x 152: 492pp

Hb: 978-1-771-88626-0: **£131.00**

eBook: 978-1-315-11153-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886260](http://www.crcpress.com/9781771886260)

## Biology and Ecology of Edible Marine Gastropod Molluscs



**Ramasamy Santhanam**, Former Dean, Tamilnadu Veterinary & Animal Sciences University, Thoothukudi, India

*Series: Biology and Ecology of Marine Life*

This comprehensive volume focuses exclusively on sea snails or gastropods, which are popular food items and occupy an important role as commercial shell craft industry. Familiar examples include conchs (highly sought after due to their mild flavor) as well as escargot, abalone, and periwinkle snails. This book covers the profile (habitat, distribution, morphology, food and feeding, reproduction, conservation status, etc.) of about 180 species of commercial edible marine gastropod molluscs as well as their nutritional values, commercial importance, and pharmaceutical value. Also included is information on their prevalent diseases and parasites.

Apple Academic Press

**Market:** Marine & Aquatic Science

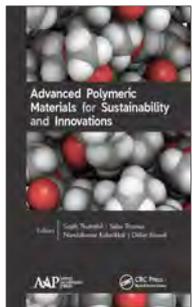
August 2018: 229 x 152: 460pp

Hb: 978-1-771-88638-3: **£124.00**

eBook: 978-1-315-09943-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886383](http://www.crcpress.com/9781771886383)

## Advanced Polymeric Materials for Sustainability and Innovations



Edited by **Sajith Thottathil**, **Sabu Thomas**, Point Pleasant, New Jersey, USA, **Nandakumar Kalarikkal**, Assoc Prof & Head, Advanced Materials Laboratory, School of Pure and Applied Physics, International & Inter University Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kerala, India and **Didier Rouxel**

The informative volume discusses recent advancements in the research and development in synthesis, characterization, processing, morphology, structure, and properties of advanced polymeric materials. With contributions from leading international researchers and professors in academic, government and industrial institutions, *Advanced Polymeric Materials for Sustainability and Innovations* has a special focus on eco-friendly polymers, polymer composites, nanocomposites,

and blends and materials for traditional and renewable energy.

Apple Academic Press

**Market:** Polymer Science

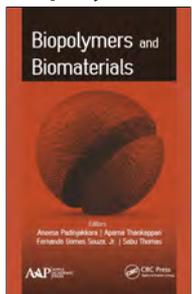
October 2018: 229 x 152: 370pp

Hb: 978-1-771-88633-8: **£124.00**

eBook: 978-1-315-10243-6

\* For full contents and more information, visit: [www.crcpress.com/9781771886338](http://www.crcpress.com/9781771886338)

## Biopolymers and Biomaterials



Edited by **Aneesa Padinjakkara**, Mahatma Gandhi University, Priyadarsini Hills Kottayam, Kerala, India, **Aparna Thankappan**, Mahatma Gandhi University, Kottayam, India, **Fernando Gomes Souza, Jr.**, LaBioS Centro de Tecnologia Cidade Universitaria, Rio de Janeiro, Brazil and **Sabu Thomas**, Point Pleasant, New Jersey, USA

This new volume, *Biopolymers and Biomaterials*, covers the science and application of biopolymers and biomaterials. It presents an array of different studies on biopolymers and biomaterials, along with their results, interpretation, and the conclusions arrived at through investigations. It includes biopolymer synthesis, their characterizations, and their potential applications.

Apple Academic Press

**Market:** Polymer Science

December 2018: 229 x 152: 370pp

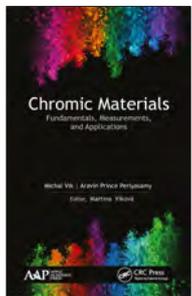
Hb: 978-1-771-88615-4: **£124.00**

eBook: 978-1-315-16198-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886154](http://www.crcpress.com/9781771886154)

## Chromic Materials

Fundamentals, Measurements, and Applications



Edited by **Michal Vlk**, Associate Professor, Department of Material Science, Technical University of Liberec, Czech Republic, **Aravin Prince Periyasamy**, Point Pleasant, New Jersey, USA and **Martina Víková**, PhD Associate Professor, Material Science, Department of Material Engineering, Technical University of Liberec, Czech Republic

This new book, *Chromic Materials: Fundamentals, Measurements, and Applications*, reflects the state of art in the science of color-changeable materials. The book describes the facts behind the chromic phenomena from the point of application, spectrophotometry of chromic materials, and instrumentation and their testing and provides an abundance of in-depth knowledge about the field of colorimetry.

Apple Academic Press

**Market:** Industrial Textiles

September 2018: 235 x 156: 422pp

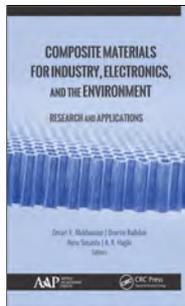
Hb: 978-1-771-88680-2: **£131.00**

eBook: 978-1-315-17100-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886802](http://www.crcpress.com/9781771886802)

## Composite Materials for Industry, Electronics, and the Environment

Research and Applications



Edited by **Omari V. Mukbaniani**, **Devrim Balkose**, **Heru Susanto** and **A.K. Haghi**

*Composite Materials for Industry, Electronics, and the Environment: Research and Applications* focuses on different aspects of composite systems that are associated with research and development, helping to bridge the gap between classical analysis and modern, real-life applications. The book provides practical insights into many areas of composite materials. The chapters look at the experimental and theoretical aspects of composite materials, regarding preparation, processing, design, properties, and practical implications. It also presents recent advancements, research, and development prospects of advanced composite materials that provide new solutions for advanced technologies.

Apple Academic Press

**Market:** Materials Science

April 2019: 235 x 156: 350pp

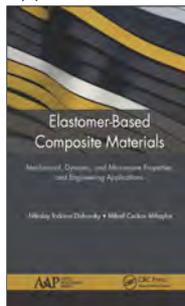
Hb: 978-1-771-88740-3: **£124.00**

eBook: 978-0-429-45793-7

\* For full contents and more information, visit: [www.crcpress.com/9781771887403](http://www.crcpress.com/9781771887403)

## Elastomer-Based Composite Materials

Mechanical, Dynamic and Microwave Properties, and Engineering Applications



Edited by **Nikolay Dishovsky**, Point Pleasant, New Jersey, USA and **Mihail Mihaylov**, Point Pleasant, New Jersey, USA

*Elastomer-Based Composite Materials: Mechanical, Dynamic, and Microwave Properties and Engineering Applications* is focused on elastomer-based composite materials comprising different types of reinforcing fillers. The volume provides an abundance of knowledge on the detailed characterization of these fillers and on the curing, mechanical, dynamic mechanical, and dielectric and microwave properties of the elastomeric composites. The book surveys the most recent research activities of the authors, which will make it a vital reference source for scientists in both the academic and industrial sectors, as well as for individuals who are interested in rubber materials.

Apple Academic Press

**Market:** Polymer Science

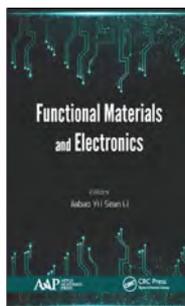
May 2018: 235 x 156: 486pp

Hb: 978-1-771-88620-8: **£131.00**

eBook: 978-1-315-15958-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886208](http://www.crcpress.com/9781771886208)

## Functional Materials and Electronics



Edited by **Jiabao Yi**, Point Pleasant, New Jersey, USA and **Sean Li**, Point Pleasant, New Jersey, USA

This edited book focuses on the newly developed functional materials and their applications for electronics and spintronics devices. Electronic devices have become a part of our daily modern life involving mobile phones, data storage, computers, and satellites, and there is relentless growth in microelectronics. The book covers the topic of oxide materials for electronics devices, new materials, and new properties, especially in the newly developed research areas, such as oxide magnetic semiconductors and two-dimensional electron gas.

Apple Academic Press

**Market:** Electronics

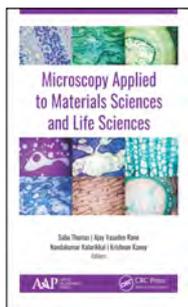
May 2018: 235 x 156: 350pp

Hb: 978-1-771-88610-9: **£124.00**

eBook: 978-1-315-16736-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886109](http://www.crcpress.com/9781771886109)

## Microscopy Applied to Materials Sciences and Life Sciences



Edited by **Ajay Vasudeo Rane, Sabu Thomas**, Point Pleasant, New Jersey, USA and **Nandakumar Kalarikkal**, Assoc Prof & Head, Advanced Materials Laboratory, School of Pure and Applied Physics, International & Inter University Centre for Nanoscience & Nanotechnology, Mahatma Gandhi University, Kerala, India

This new volume, *Microscopy Applied to Materials Sciences and Life Sciences*, focuses on recent theoretical and practical advances in polymers and their blends, composites, and nanocomposites related to their microscopic characterization. It highlights recent accomplishments and trends in the field of polymer nanocomposites and filled polymers related to microstructural characterization. This book gives an insight and better understanding into the development in microscopy as a

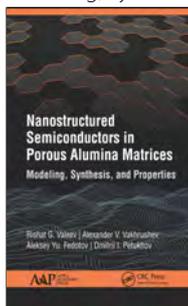
tool for characterization.

Apple Academic Press  
**Market:** Materials Science  
 November 2018: 235 x 156: 502pp  
 Hb: 978-1-771-88672-7: **£139.00**  
 eBook: 978-1-351-25158-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886727](http://www.crcpress.com/9781771886727)

## Nanostructured Semiconductors in Porous Alumina Matrices

Modeling, Synthesis, and Properties



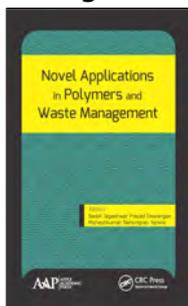
Edited by **Rishat G. Valeev, Alexander V. Vakhruhev, Aleksey Yu. Fedotov** and **Dmitrii I. Petukhov**

Explores new developments in the modeling, synthesis, and properties of functional semiconductor nanostructures in porous anodic alumina matrices. The book focuses on luminescent nanoparticles in organic and inorganic dielectric matrices, specifically in porous alumina films, as these are most relevant due to their capacity for particle division and ability to provide environmental protection. With a particular emphasis on experimental and theoretical studies of the synthesis processes, the book informs readers about these nanostructures through rigorous investigation of their properties.

Apple Academic Press  
**Market:** Material Science  
 April 2019: 229 x 152: 312pp  
 Hb: 978-1-771-88770-0: **£124.00**  
 eBook: 978-0-429-39814-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887700](http://www.crcpress.com/9781771887700)

## Novel Applications in Polymers and Waste Management



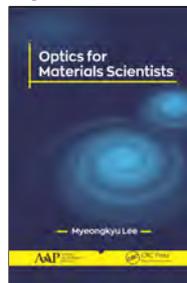
Edited by **Badal Jageshwar Prasad Dewangan**, Point Pleasant, New Jersey, USA and **Maheshkumar Narsingrao Yenkie**, R.T.M. Nagpur University, India

This book focuses on exciting new research in polymer science. The first section of the book deals with new advancements in polymer technology, which includes polymers that are responsible for progress in the field of energy, electronics, and medical sciences. It focuses on the most promising polymer nanocomposites and nanomaterials. Composites are becoming more important because they can help to improve quality of life. The second section of the book highlights this aspect of macromolecules, while the third section emphasizes biopolymers, their development, and applications.

Apple Academic Press  
**Market:** Polymer Science  
 January 2018: 229 x 152: 346pp  
 Hb: 978-1-771-88475-4: **£99.00**  
 eBook: 978-1-315-36584-8

\* For full contents and more information, visit: [www.crcpress.com/9781771884754](http://www.crcpress.com/9781771884754)

## Optics for Materials Scientists



Myeongkyu Lee

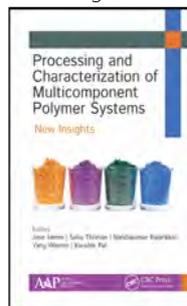
This volume is intended to help materials scientists and engineers fully comprehend the principles of optics and optical phenomena and effectively utilize them for the design and fabrication of optical materials and devices. Materials science is an interdisciplinary field at the intersection of various fields, such as metallurgy, ceramics, solid-state physics, chemistry, chemical engineering, and mechanical engineering. Thus, many physicists, chemists, and engineers also work in materials science. Many materials scientists generally do not have a strong background in optics, and this book aims to fill that gap.

Apple Academic Press  
**Market:** Materials Science  
 February 2019: 229 x 152: 376pp  
 Hb: 978-1-771-88757-1: **£131.00**  
 eBook: 978-0-429-42535-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887571](http://www.crcpress.com/9781771887571)

## Processing and Characterization of Multicomponent Polymer Systems

New Insights



Edited by **Jose James, Sabu Thomas** and **Nandakumar Kalarikkal**

This volume highlights some of the latest innovations and principles of nanostructured polymeric materials and polymer nanocomposites. It is devoted to novel architectures at the nano-level with an emphasis on new synthesis and characterization methods. Organized into several sections, the chapters cover a selection of topics on Biocomposites and nanocomposites; Interpenetrating polymeric networks and nanostructured materials; Theoretical protocols for polymers and clusters; Special topics in polymer; and processing and polymer coating.

Apple Academic Press  
**Market:** Materials Science  
 March 2019: 235 x 156: 346pp  
 Hb: 978-1-771-88724-3: **£124.00**  
 eBook: 978-0-429-46979-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887243](http://www.crcpress.com/9781771887243)

## Protective Armor Engineering Design

Magdi El Messiry

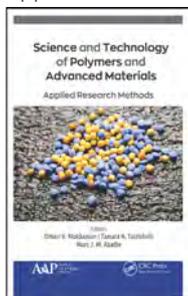
This new book, *Protective Armor Engineering Design*, provides an in-depth survey of the state of the art of research and practical techniques in the area of protected fabrics, especially stab-resistant and bulletproof fabrics. There is increasing interest in the area of protective vests, either for protection against bullets or protection from the most realistic threats within domestic frontline operations: edged weapon, knives, and medical needles, and this volume addresses that interest.

Apple Academic Press  
**Market:** Textiles  
 June 2019: 229 x 152: 387pp  
 Hb: 978-1-771-88787-8: **£131.00**  
 eBook: 978-0-429-05723-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887878](http://www.crcpress.com/9781771887878)

## Science and Technology of Polymers and Advanced Materials

Applied Research Methods



Edited by **Omari V. Mukbaniani, Tamara N. Tatrishvili and Marc J. M. Abadie**

Presents a selection of new approaches in the field of composites and nanomaterials, polymer synthesis and applications, and materials and their properties. Some composites/nanocomposites and interfaces are explored as well, some with medical applications. The authors also look at simulations and modeling, synthesis involving photochemistry, self-assembled hydrogels, and sol-gel processing.

Apple Academic Press

**Market:** Material Science  
February 2019: 235 x 156: 389pp  
Hb: 978-1-771-88753-3: **£124.00**  
eBook: 978-0-429-42530-1

\* For full contents and more information, visit: [www.crcpress.com/9781771887533](http://www.crcpress.com/9781771887533)

## Smart Materials: Integrated Design, Engineering Approaches, and Potential Applications



Edited by **Anca Filimon**

This new volume focuses on a different class of polymers that are used as smart materials in the areas of biotechnology, medicine, and engineering. The chapters lay the groundwork for assimilation and exploitation of this technological advancement. Four of the key aspects of the approach that we have developed throughout this book are highlighted, namely the multidisciplinary exchange of knowledge, exploration of the relationships between multiple scales and their different behaviors, understanding that materials properties are dictated at the smallest scale, and, therefore, the recognition that macro-scale behavior can be controlled by nano-scale design.

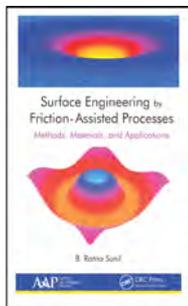
Apple Academic Press

**Market:** Polymeric Materials and Plastics  
August 2018: 229 x 152: 426pp  
Hb: 978-1-771-88687-1: **£124.00**  
eBook: 978-1-351-16796-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886871](http://www.crcpress.com/9781771886871)

## Surface Engineering by Friction-Assisted Processes

Methods, Materials, and Applications



**B. Ratna Sunil**, Assistant Professor, Department of Mechanical Engineering; Associate Dean of Academics, Rajiv Gandhi University of Knowledge Technologies (RGUKT), Nuzvid, Andhra Pradesh, India

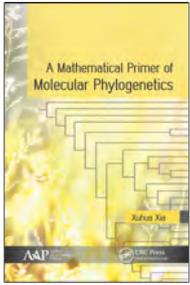
This new book discusses in detail three friction-assisted processes that have been rapidly gaining momentum in materials and surface engineering. Friction-assisted processes are methods of processing solids that can alter the properties of a surface. This book functions as a comprehensive resource, compiling extensive descriptions of friction stir processing, fabrication of surface metal matrix composites, and friction surfacing into one volume.

Apple Academic Press

**Market:** Material Science  
April 2019: 235 x 156: 342pp  
Hb: 978-1-771-88769-4: **£131.00**  
eBook: 978-0-429-39809-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887694](http://www.crcpress.com/9781771887694)

## A Mathematical Primer of Molecular Phylogenetics

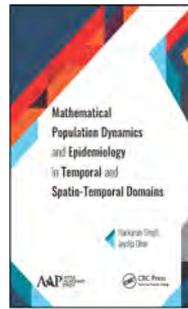


**Xuhua Xia**  
This volume, *A Mathematical Primer of Molecular Phylogenetics*, offers a unique perspective on a number of phylogenetic issues that have not been covered in detail in previous publications. The volume provides sufficient mathematical background for young mathematicians and computational scientists, as well as mathematically inclined biology students, to make a smooth entry into the expanding field of molecular phylogenetics. The book will also provide sufficient details for researchers in phylogenetics to understand the workings of existing software packages used.

Apple Academic Press  
**Market:** Genetics  
February 2019: 229 x 152: 215pp  
Hb: 978-1-771-88755-7: **£116.00**  
eBook: 978-0-429-42587-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887557](http://www.crcpress.com/9781771887557)

## Mathematical Population Dynamics and Epidemiology in Temporal and Spatio-Temporal Domains



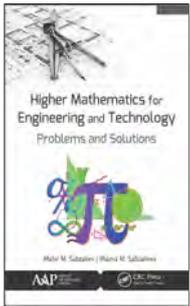
**Harkaran Singh and Joydip Dhar**  
This new volume, *Mathematical Population Dynamics and Epidemiology in Temporal and Spatio-Temporal Domains*, focuses on the study of population dynamics with special emphasis on the migration of populations in a heterogeneous patchy habitat, the human and animal population, and the spreading of epidemics, an important area of research in mathematical biology dealing with the survival of different species. The volume also provides the background needed to interpret, construct, and analyze a wide variety of mathematical models. Most of the techniques presented in the book can be readily applied to model other phenomena, in biology as well as in other disciplines.

Apple Academic Press  
December 2018: 229 x 152: 274pp  
Hb: 978-1-771-88671-0: **£124.00**  
eBook: 978-1-351-25170-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886710](http://www.crcpress.com/9781771886710)

## Higher Mathematics for Engineering and Technology

Problems and Solutions

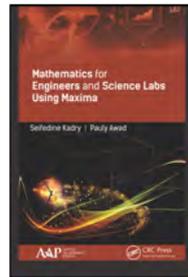


**Mahir M. Sabzaliev and Ilhama M. Sabzalieva**  
Based on and enriched by the long-term teaching experience of the authors, *Higher Mathematics for Engineering and Technology: Problems and Solutions* covers the major themes of mathematics in engineering and technical specialties. The book covers the elements of linear algebra and analytic geometry, differential calculus of a function of one variable, and elements of higher algebra. On each theme the authors first present short theoretical overviews and then go on to give problems to be solved. The authors provide the solution of some typical, relatively difficult problems and guidelines for solving them.

Apple Academic Press  
**Market:** Mathematics  
April 2018: 229 x 152: 262pp  
Hb: 978-1-771-88642-0: **£99.99**  
eBook: 978-0-203-73013-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886420](http://www.crcpress.com/9781771886420)

## Mathematics for Engineers and Scientists Labs for Maxima

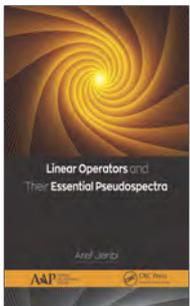


**Seifedine Kadry and Pauly Awad**  
This book is designed to be a vital companion to math textbooks covering the topics of pre-calculus, calculus, linear algebra, differential equations, and probability and statistics. It is unique in that it teaches how to solve these problems using Maxima open-source software, a system for the manipulation of symbolic and numerical expressions, including differentiation, integration, Taylor series, Laplace transforms, ordinary differential equations, and more. One of the benefits of using Maxima to solve mathematics problems is the immediacy with which it produces answers. Learning Maxima now will pay off for students and beginning professionals in mathematics, science, and engineering.

Apple Academic Press  
**Market:** Mathematics  
March 2019: 235 x 156: 304pp  
Hb: 978-1-771-88727-4: **£116.00**  
eBook: 978-0-429-46971-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887274](http://www.crcpress.com/9781771887274)

## Linear Operators and Their Essential Pseudospectra

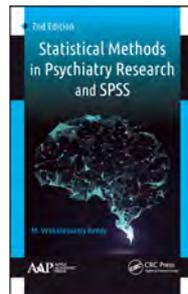


**Aref Jeribi**  
This volume provides a comprehensive study of spectral theory of linear operators defined on Banach spaces. The central items of interest in the volume include various essential spectra, but the author also considers some of the generalizations that have been studied. This volume presents a survey of results concerning various types of essential spectra and pseudospectra in a unified, axiomatic way and also discusses several topics that are new but which relate to the concepts and methods emanating from the book.

Apple Academic Press  
**Market:** Real, Complex & Functional Analysis  
April 2018: 229 x 152: 352pp  
Hb: 978-1-771-88699-4: **£124.00**  
eBook: 978-1-351-04627-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886994](http://www.crcpress.com/9781771886994)

## 2nd Edition Statistical Methods in Psychiatry Research and SPSS



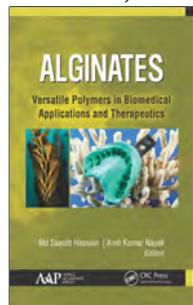
**M. Venkataswamy Reddy**, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, India  
This volume, going into its second edition, has been helping psychiatrists expand their knowledge of statistical methods and fills the gaps in their applications as well as introduces data analysis software. The book emphasizes the classification of fundamental statistical methods in psychiatry research that are precise and simple. Professionals in the field of mental health and allied subjects without any mathematical background will easily understand all the relevant statistical methods and carry out the analysis and interpret the results in their respective field without consulting any statistician. This new volume has over 100 pages of new material, including several new appendices.

Apple Academic Press  
**Market:** Statistics  
January 2019: 229 x 152: 426pp  
Hb: 978-1-771-88781-6: **£124.00**  
eBook: 978-0-429-02330-9  
Prev. Ed Hb: 978-1-771-88035-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887816](http://www.crcpress.com/9781771887816)

## Alginates

Versatile Polymers in Biomedical Applications and Therapeutics



Edited by **Md Saquib Hasnain** and **Amit Kumar Nayak**

This new volume explores the latest research on the use of alginate as a biopolymer in various biomedical applications and therapeutics. The biomedical and therapeutic uses of alginates and modified alginates discussed in this book include tissue regeneration, encapsulation and delivery of drugs, nucleic acid materials, proteins and peptides, genes, herbal therapeutic agents, nutraceuticals, and more. This book also describes the synthesis and characterizations of various alginate and modified alginate systems, such as hydrogels, gels, composites, nanoparticles, scaffolds, etc., used for the biomedical applications and therapeutics.

Apple Academic Press

**Market:** Pharmacology

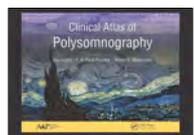
February 2019: 229 x 152: 745pp

Hb: 978-1-771-88782-3: **£193.00**

eBook: 978-0-429-02343-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887823](http://www.crcpress.com/9781771887823)

## Clinical Atlas of Polysomnography



Ravi Gupta, S. R. Pandi-Perumal, Point Pleasant, New Jersey, USA and Ahmed S. Bahammam

Written for sleep technologists, this book provides basic information regarding normal sleep, sleep disorders, and electrophysiology that is outside of the scope of the AASM manual (*AASM Manual for the Scoring of Sleep and Associated*

*Events*). It aims to act as a guide through the fundamental aspects of, for example, types of overnight sleep study, establishing a sleep laboratory, preparing the patient for a sleep evaluation study, placement of electrodes and leads, and the scientific aspects of such placement, i.e., why they are placed at that particular position. This information will be very useful in those parts of the globe where formal training in sleep technology is not yet available.

Apple Academic Press

**Market:** Sleep Disorders

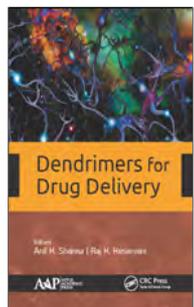
May 2018: 297x210: 518pp

Hb: 978-1-771-88663-5: **£147.00**

eBook: 978-0-203-71151-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886635](http://www.crcpress.com/9781771886635)

## Dendrimers for Drug Delivery



Edited by **Anil K. Sharma**, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, India and **Raj K. Keservani**, Faculty of B. Pharmacy, CSM Group of Institutions, Allahabad, India

*Dendrimers for Drug Delivery* provides an abundance of information on dendrimers and their applications in the field of drug delivery. The volume begins with an introduction to dendrimers, summarizing dendrimer applications and the striking features of dendrimers. It goes on to present the details of usual properties, structure, classification, and methods of synthesis, with relevant examples. The toxicity of dendrimers is also discussed. The chapter authors provide an exhaustive amount of information about dendrimers and their biomedical applications, including biocompatibility and toxicity aspects, a

very useful feature.

Apple Academic Press

**Market:** Drug Delivery

September 2018: 235 x 156: 426pp

Hb: 978-1-771-88662-8: **£131.00**

eBook: 978-0-203-71315-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886628](http://www.crcpress.com/9781771886628)

## Ethnopharmacology and Biodiversity of Medicinal Plants



Edited by **Jayanta Kumar Patra**, **Gitishree Das**, **Sanjeet Kumar** and **Hrudayanath Thatoi**

*Ethnopharmacology and Biodiversity of Medicinal Plants* provides a multitude of contemporary views on the diversity of medicinal plants, discussing both their traditional uses and therapeutic claims. This book emphasizes the importance of cataloging ethnomedical information as well as examining and preserving the diversity of traditional medicines. It also discusses the challenges present with limited access to modern medicine and the ways in which research can be conducted to enhance these modern practices. The book also explores the conservation procedures for endangered plant species and discusses their relevance to ethnopharmacology.

Apple Academic Press

**Market:** Alternative Medicine

April 2019: 235 x 156: 515pp

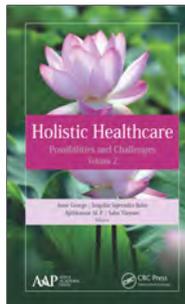
Hb: 978-1-771-88773-1: **£131.00**

eBook: 978-0-429-39819-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887731](http://www.crcpress.com/9781771887731)

## Holistic Healthcare

Possibilities and Challenges Volume 2



**Anne George**, **Snigdha S. Babu**, **Ajithkumar M. P** and **Sabu Thomas**

This new book is a compilation of contributions from scientists, healthcare experts, and doctors working actively to bring about wholesome healing to individuals, looking at cutting-edge holistic therapies. The volume includes chapters that deal with improving the general health of people from various walks of life, to treating some very challenging diseases. Various schools of treatments, exercise regimes, and meditations are discussed. Specific topics include the use of alternative therapy for human health and healing, including yoga, meditation, acupuncture, prayer, herbs, Ayurvedic treatment, and homoeopathy.

Apple Academic Press

**Market:** Alternative Medicine

January 2019: 235 x 156: 305pp

Hb: 978-1-771-88715-1: **£124.00**

eBook: 978-0-429-48780-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887151](http://www.crcpress.com/9781771887151)

## Medicinal Chemistry with Pharmaceutical Product Development



Edited by **Debarshi Kar Mahapatra** and **Sanjay Kumar Bharti**

This volume focuses on novel therapeutics and strategies for the development of pharmaceutical products, keeping the drug molecule as the central component. It discusses current theoretical and practical aspects of pharmaceuticals for the discovery and development of novel therapeutics for health problems. Explaining the necessary features essential for pharmacological activity, it takes an interdisciplinary approach by including a unique combination of pharmacy, chemistry, and medicine along with clinical aspects. It takes into consideration the therapeutic regulations of the USP along with all the latest therapeutic guidelines put forward by WHO, and the US Food and Drug Administration.

Apple Academic Press

**Market:** Medicinal Chemistry

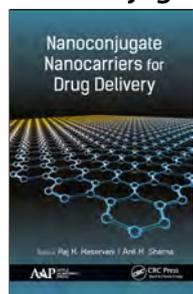
February 2019: 229 x 152: 368pp

Hb: 978-1-771-88710-6: **£124.00**

eBook: 978-0-429-48784-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887106](http://www.crcpress.com/9781771887106)

## Nanoconjugate Nanocarriers for Drug Delivery



Edited by **Raj K. Keservani**, Faculty of B. Pharmacy, CSM Group of Institutions, Allahabad, India and **Anil K. Sharma**, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, India

This new volume presents a plethora of new research on the use of nanoconjugate nanocarriers in drug delivery. With chapters from highly skilled, experienced, and renowned scientists and researchers is divided into four sections, providing an introduction to nanocarriers for drug delivery, physicochemical features of nanocarriers, and specific applications dealing with drug delivery in particular. The nanocarriers covered in the book include nanoparticles, vesicular carriers, carriers having carbon as the core constituent, dispersed

systems, etc. The book also delves into the interaction and associations between drug delivery research and its therapeutic applications in practice.

Apple Academic Press

**Market:** Drug Delivery

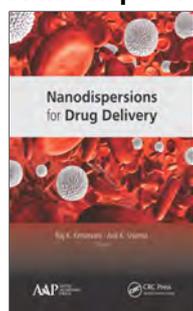
October 2018: 229 x 152: 516pp

Hb: 978-1-771-88677-2: **£131.00**

eBook: 978-1-351-17104-5

\* For full contents and more information, visit: [www.crcpress.com/9781771886772](http://www.crcpress.com/9781771886772)

## Nanodispersions for Drug Delivery



Edited by **Raj K. Keservani**, Faculty of B. Pharmacy, CSM Group of Institutions, Allahabad, India and **Anil K. Sharma**, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, India

This volume, *Nanodispersions for Drug Delivery*, addresses efforts to overcome the shortcomings of conventional dosage forms by exploiting the principles of nanoscience to deliver drugs for medical treatment. Nanodispersions are an important aspect because they possess globules/particles in sizes usually below 1000 nm in which the drug is dispersed in a continuous medium employing surface-active agents as stabilizers.

Apple Academic Press

**Market:** Drug Delivery

October 2018: 235 x 156: 400pp

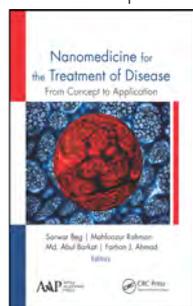
Hb: 978-1-771-88701-4: **£131.00**

eBook: 978-1-351-04756-2

\* For full contents and more information, visit: [www.crcpress.com/9781771887014](http://www.crcpress.com/9781771887014)

## Nanomedicine for the Treatment of Disease

From Concept to Application



Edited by **Sarwar Beg**, **Mahfoozur Rahman**, **Md. Abul Barkat** and **Farhan Jalees Ahmad**

The volume explores the use nanomedicines for the diagnosis and treatment of a multitude various diseases and health conditions, including respiratory diseases, neurological disorders, genetic diseases, pulmonary fungal infections, neuroAIDS, cardiovascular disorders, gastric and colonic diseases, skin disorders, cancer, brain tumors, leishmaniasis and other visceral diseases, hypertension, and ocular diseases.

Apple Academic Press

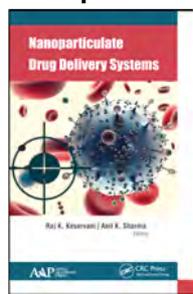
March 2019: 235 x 156: 551pp

Hb: 978-1-771-88767-0: **£147.00**

eBook: 978-0-429-42571-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887670](http://www.crcpress.com/9781771887670)

## Nanoparticulate Drug Delivery Systems



Edited by **Raj K. Keservani**, Faculty of B. Pharmacy, CSM Group of Institutions, Allahabad, India and **Anil K. Sharma**, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, India

This volume focuses on nanoparticulate nanocarriers and recent advances in the field of drug delivery. The book provides an informative introduction to polymeric nanoparticles—their general physicochemical features and their applications in drug delivery systems. It looks at more specific applications and techniques, such as the use of magnetic nanoparticles, gold nanoparticles in therapeutics, and superparamagnetic iron oxide nanoparticles (SPIONs) for the treatment of cancer. Also discussed are lipid-based nanoparticulates for various

applications, including skin care, and some of the newer nanoarchitectures, including dendrimers in gene delivery and carbon nanotubes for drug delivery.

Apple Academic Press

**Market:** Drug Delivery

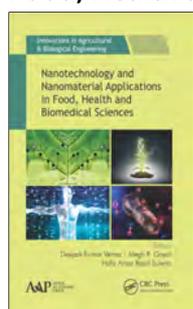
January 2019: 235 x 156: 422pp

Hb: 978-1-771-88695-6: **£124.00**

eBook: 978-1-351-13726-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886956](http://www.crcpress.com/9781771886956)

## Nanotechnology and Nanomaterial Applications in Food, Health and Biomedical Sciences



Edited by **Deepak Kumar Verma**, **Megh R. Goyal** and **Hafiz Anasr Rasul Suleria**

*Series: Innovations in Agricultural & Biological Engineering*

The new volume presents some important issues and discusses the multitude of possibilities for development in nanotechnology that focuses on overcoming the problems and challenges faced by the biomedical and food industries. The volume hopes to facilitate the development of devices and materials that benefits patients and their healthcare.

Apple Academic Press

**Market:** Nanobiotechnology

March 2019: 235 x 156: 343pp

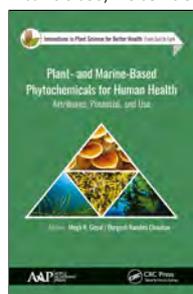
Hb: 978-1-771-88764-9: **£124.00**

eBook: 978-0-429-42566-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887649](http://www.crcpress.com/9781771887649)

## Plant- and Marine- Based Phytochemicals for Human Health

Attributes, Potential, and Use



Edited by **Megh R. Goyal**, Point Pleasant, New Jersey, USA and **Durgesh Nandini Chauhan**

*Series: Innovations in Plant Science for Better Health*

This new book, *Plant- and Marine- Based Phytochemicals for Human Health: Attributes, Potential, and Use*, provides insight with scientific evidence on the use of medicinal plants in the treatment of certain diseases. It describes bioactive compounds of marine and plant origin that have been discovered to be advantageous for human health, shedding new light on the potential of phytochemicals on human health and contributing to the ocean of knowledge on phytochemistry and pharmaceutical biology. In addition, the role of plant-based pharmaceuticals is also discussed as an example of innovative

uses of plant product.

Apple Academic Press

**Market:** Pharmacy

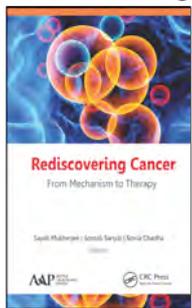
November 2018: 229 x 152: 368pp

Hb: 978-1-771-88670-3: **£131.00**

eBook: 978-1-351-25198-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886703](http://www.crcpress.com/9781771886703)

## Rediscovering Cancer: From Mechanism to Therapy



Edited by Sayali Mukherjee, Somali Sanyal and Sonia Chadha

This volume brings together new research on molecular mechanism and cancer therapeutics in one place. Chapters from experts in their respective fields cover molecular mechanisms, etiology, prognosis, detection, and treatment of cancer. Emphasis has been given to the intricate mechanism behind the deregulation of cell division, disruption of cell cycle check points, mutation in oncogenes and tumor suppressor genes, apoptosis, and erratic cell signaling. The book discusses in detail topics such as angiogenesis and tumor microenvironment, which are increasingly receiving attention, especially in the field of neoplastic vascularization and metastasis.

Apple Academic Press

**Market:** Oncology and Radiation Therapy

September 2018: 235 x 156: 662pp

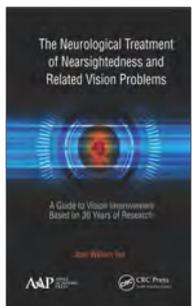
Hb: 978-1-771-88690-1: **£154.00**

eBook: 978-1-351-16656-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886901](http://www.crcpress.com/9781771886901)

## The Neurological Treatment for Nearsightedness and Related Vision Problems

A Guide to Vision Improvement Based on 30 Years of Research



John William Yee

This volume introduces and explains an effective treatment for correcting nearsightedness and related problems naturally and neurologically. The author presents his methodology of correcting primary refractive errors in the mild and moderate myopic range using Ortho C., a treatment that reduces the excessive tension to reinstate the proper neurological message of the eye. The author describes his successful treatment that reduces the excessive tension to reinstate the proper neurological message of the eye. It includes a myriad of case studies showing the effectiveness of this treatment, based on the author's over 30 years of research.

Apple Academic Press

**Market:** Ophthalmology

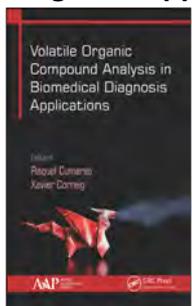
April 2019: 229 x 152: 275pp

Hb: 978-1-771-88732-8: **£68.99**

eBook: 978-0-429-46504-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887328](http://www.crcpress.com/9781771887328)

## Volatile Organic Compound Analysis in Biomedical Diagnosis Applications



Edited by Raquel Cumeras and Xavier Correig

This volume presents a thought-provoking state-of-the-art picture of how volatile compounds are used in metabolomics, currently a hot topic in the metabolomics field. It provides a thorough description of what are volatile organic compounds (VOCs), why are they important in biomedicine, and what are the analytical platforms used. It also looks at multivariate analysis and databases needs. The book explains why volatiles are important compounds in biomedical diagnosis and how researchers detect and analyze them.

Apple Academic Press

**Market:** Biotechnology

November 2018: 229 x 152: 272pp

Hb: 978-1-771-88744-1: **£116.00**

eBook: 978-0-429-43358-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887441](http://www.crcpress.com/9781771887441)

## Molecular Biology

Different Facets



**Anjali Priyadarshini and Prerna Pandey**

This new book, *Molecular Biology: Different Facets*, provides a comprehensive description of the basic tenets of molecular biology, from mechanisms to its elaborate role in gene regulation. The initial sections cover the history of genetics and molecular biology. The book then goes on to highlight the significance of molecular approaches for all biological processes in both simple and complex cells.

Apple Academic Press

**Market:** Molecular Biology

July 2018: 229 x 152: 318pp

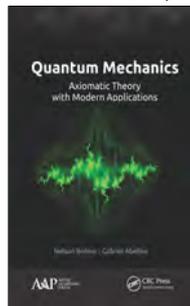
Hb: 978-1-771-88641-3: **£116.00**

eBook: 978-1-315-09927-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886413](http://www.crcpress.com/9781771886413)

## Quantum Mechanics

Axiomatic Theory with Modern Applications



**Nelson Bolivar and Gabriel Abellán**

This volume will act as a guide through the various aspects of quantum mechanics. It not only involves the basics but also addresses new themes developed in the field in recent years. These include quantum mechanics in relation to electronics, as in quantum dots, spintronics, cryptography, and other more theoretical aspects such as path integral formulation and supersymmetric quantum mechanics. The volume also presents a number of mathematical tools and physical consequences derived from quantum mechanics axiomatic.

Apple Academic Press

**Market:** Quantum Physics

May 2018: 229 x 152: 340pp

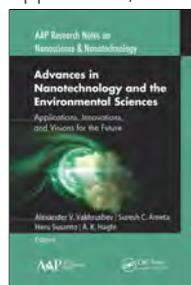
Hb: 978-1-771-88691-8: **£124.00**

eBook: 978-1-351-16628-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886918](http://www.crcpress.com/9781771886918)

## Advances in Nanotechnology and the Environmental Sciences

Applications, Innovations, and Visions for the Future



Edited by **Alexander V. Vakhruшев, Suresh C. Ameta, Heru Susanto** and **A. K. Haghi**

Series: *AAP Research Notes on Nanoscience and Nanotechnology*

This volume showcases a selection of new research on nanotechnological applications for environmental protection along with new advanced technologies in nanochemistry. It presents an interdisciplinary approach that brings together materials science, chemistry, and nanotechnology.

Apple Academic Press

Market: Nanotechnology

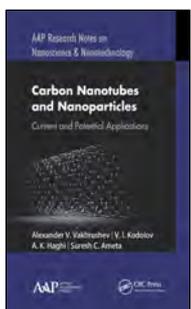
February 2019: 229 x 152: 215pp

Hb: 978-1-771-88754-0: **£124.00**

eBook: 978-0-429-42583-7

\* For full contents and more information, visit: [www.crcpress.com/9781771887540](http://www.crcpress.com/9781771887540)

## Carbon Nanotubes and Nanoparticles



Edited by **Alexander V. Vakhruшев, V. I. Kodolov** and **A. K. Haghi**

Series: *AAP Research Notes on Nanoscience and Nanotechnology*

This new volume looks at significant new research, methodologies, and applications in the fields of carbon nanotubes and nanoparticles. It explores a variety of new developments in advanced carbon nanotubes and nanoparticles along with the tools to characterize and predict their properties and behavior. It introduces and reviews methods that are most frequently encountered in sophisticated nano-scaled materials domains.

Apple Academic Press

Market: Nanotechnology

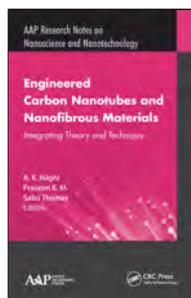
April 2019: 229 x 152: 302pp

Hb: 978-1-771-88734-2: **£124.00**

eBook: 978-0-429-46387-7

\* For full contents and more information, visit: [www.crcpress.com/9781771887342](http://www.crcpress.com/9781771887342)

## Engineered Carbon Nanotubes and Nanofibrous Material



Edited by **A. K. Haghi**, Canadian Research and Development Center of Sciences and Cultures (CRDCSC), Montreal, Quebec, Canada, **Praveen K.M.** and **Sabu Thomas**, Point Pleasant, New Jersey, USA

Series: *AAP Research Notes on Nanoscience and Nanotechnology*

Carbon nanotubes, with their extraordinary engineering properties, have garnered much attention in the past 10 years. Because of the broad range of potential applications, the scientific community is more motivated than ever to move beyond basic properties and explore the real issues associated with carbon nanotube-based applications. Presenting up-to-date literature that presents the current state of the science, this book fully explores the development phase of carbon nanotube-based applications. It looks at carbon nanotubes and their applications in diverse areas of science and engineering and considers environmental engineering applications as well.

Apple Academic Press

Market: Nanoscience/Nanotechnology

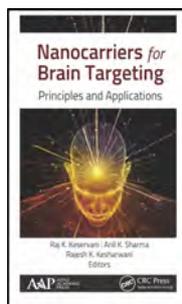
November 2018: 229 x 152: 264pp

Hb: 978-1-771-88704-5: **£116.00**

eBook: 978-1-351-04812-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887045](http://www.crcpress.com/9781771887045)

## Nanocarriers for Brain Targeting



Edited by **Raj K. Keservani**, Sagar Institute of Research and Technology-Pharmacy, Bhopal, India, **Anil K. Sharma**, Lecturer, Delhi Institute of Pharmaceutical Sciences and Research, University of Delhi, India and **Rajesh K. Kesharwani**, Faculty, National Institute of Technology, Warangal, Telangana, India

This new volume recent research on brain physiology and the development of drug delivery systems. It explores a diverse variety of strategies that can be employed to achieve drug targeting to the brain. The nanocarriers that are discussed include nanoparticles, vesicular carriers, carriers having carbon as a core constituent, dispersed systems, and more. The blood brain barrier (BBB) blocks the passage of certain substances, posing a challenge to effective drug delivery.

Apple Academic Press

Market: Nanotechnology

March 2019: 235 x 156: 593pp

Hb: 978-1-771-88730-4: **£139.00**

eBook: 978-0-429-46507-9

\* For full contents and more information, visit: [www.crcpress.com/9781771887304](http://www.crcpress.com/9781771887304)

## Nanomaterials

Physical, Chemical, and Biological Applications



Edited by **Nandakumar Kalarikkal, Sabu Thomas** and **Obey Koshy**

This new book focuses on recent developments in this field, focusing on nanostructured materials and nanocomposites. The book deals with some recent developments in the synthesis and characterization of nanomaterial as well as its incorporation into polymer matrixes. The biological applications of nanomaterials are also discussed in detail, along with new approaches in nanostructured materials and nanocomposites.

Apple Academic Press

Market: Nanoscience & Technology

May 2018: 235 x 156: 408pp

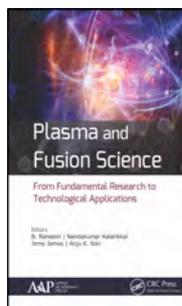
Hb: 978-1-771-88461-7: **£99.00**

eBook: 978-1-315-36590-9

\* For full contents and more information, visit: [www.crcpress.com/9781771884617](http://www.crcpress.com/9781771884617)

## Plasma and Fusion Science

From Fundamental Research to Technological Applications



Edited by **B. Raneesh, Nandakumar Kalarikkal, Jemy James** and **Anju K. Nair**

In this new book, an interdisciplinary and international team of experts provides an exploration of the emerging plasma science that is poised to make the plasma technology a reality in the manufacturing sector. The research presented here will stimulate new ideas, methods, and applications in the field of plasma science and nanotechnology.

Apple Academic Press

Market: Physics

January 2018: 229 x 152: 446pp

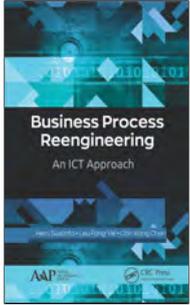
Hb: 978-1-771-88453-2: **£108.00**

eBook: 978-1-315-36594-7

\* For full contents and more information, visit: [www.crcpress.com/9781771884532](http://www.crcpress.com/9781771884532)

## Business Process Reengineering

An ICT Approach



Edited by Heru Susanto, Leu Fang-Yie and Chin Kang Chen

This volume shows how ICT (information and communications technology) can play the role of a driver of business process reengineering (BPR). ICT can aid in enabling improvement in BPR activity cycles as it provides many components that enhance performance that can lead to competitive advantages. IT can interface with BPR to can help to improve main business processes in terms of communication, inventory management, data management, management information systems, customer relationship management (CRM), computer-aided design (CAD), computer-aided manufacturing (CAM), and computer-aided engineering (CAE). This volume explores these issues in depth.

Apple Academic Press

**Market:** Information Technology  
February 2019: 235 x 156: 442pp  
Hb: 978-1-771-88711-3: **£124.00**  
eBook: 978-0-429-48857-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887113](http://www.crcpress.com/9781771887113)

## Green Consumerism: Perspectives, Sustainability, and Behavior



Edited by Ruchika Singh Malyan and Punita Duhan

This new volume provides a holistic understanding the importance of promoting green products and discusses consumers' buying intentions and decisions. The chapters consider consumer behavior theory in the context of green or ecologically friendly products from both the academic and business perspectives. The chapters present the latest empirical and analytical research in the field of green marketing and provide an abundance of information about profitable and sustainable ways and strategies to deal with environmental problems.

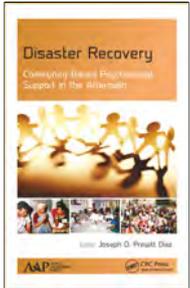
Apple Academic Press

**Market:** Sales, Marketing & Service  
November 2018: 235 x 156: 380pp  
Hb: 978-1-771-88694-9: **£116.00**  
eBook: 978-1-351-13804-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886949](http://www.crcpress.com/9781771886949)

## Disaster Recovery

Community-Based Psychosocial Support in the Aftermath



Edited by Joseph O. Prewitt Diaz

This new volume provides a wealth of realistic and applicable information for addressing mental health related issues resulting from disasters. It provides readers with both a theoretical and practical look at community-based psychosocial support and community consultation from an interdisciplinary perspective. This book uses case study methodology and practical examples to share how communities can come together, care for themselves, and use their social capital and problem-solving skills to survive and thrive. The information in the book will aid in the development of program offerings for mental health and psychosocial support in disasters and humanitarian emergencies.

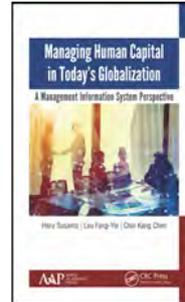
Apple Academic Press

**Market:** Emergency Response  
May 2018: 229 x 152: 332pp  
Hb: 978-1-771-88631-4: **£108.00**  
eBook: 978-1-315-10268-9

\* For full contents and more information, visit: [www.crcpress.com/9781771886314](http://www.crcpress.com/9781771886314)

## Managing Human Capital in Today's Globalization

A Management Information System Perspective



Edited by Heru Susanto, Leu Fang-Yie and Chin Kang Chen

The volume explores important issues in human capital in human resource management as it relates to management information systems (MIS). It highlights when management information systems are implemented or changed and how the responsibilities of organizational members can be drastically altered. It discusses employee resistance as one of the main outcomes of this process and offers several behavioral strategies that can be implemented to involve employees in adopting effective MIS and in overcoming the resistance during change.

Apple Academic Press

**Market:** Human resources  
April 2019: 235 x 156: 450pp  
Hb: 978-1-771-88738-0: **£116.00**  
eBook: 978-0-429-45789-0

\* For full contents and more information, visit: [www.crcpress.com/9781771887380](http://www.crcpress.com/9781771887380)

## Economic Growth and Demographic Transition in Third World Nations

A Chaos and Complexity Theory Perspective

Edited by Sefika Sule Ercetin, Nilanjan Ray and Saurabh Sen

This volume presents a new perspective on demographic transition, economic growth, and national development via exploration of the Third World economies. It provides a multidimensional approach to the close relationship between the concept of the chaos and complexity theory and provides a deliberate glance into the plight of policy formulation for demographic transition, economic growth, and development and Third World countries. The volume discusses the efficiency of good strategies and practices and their impact on business growth and economic growth, depending on the depth and diversity of infrastructure sector in particular and overall socioeconomic development in general.

Apple Academic Press

**Market:** Economics  
April 2019: 235 x 156: 464pp  
Hb: 978-1-771-88745-8: **£124.00**  
eBook: 978-0-429-43389-4

\* For full contents and more information, visit: [www.crcpress.com/9781771887458](http://www.crcpress.com/9781771887458)

## Restaurant Financial Management

A Practical Approach



Hyung-il Jung, Point Pleasant, New Jersey, USA

This new book provides valuable guidance on how to apply the concepts of accounting and finance to real-life restaurant business activities. This book is unique because it provides an understandable framework that breaks it down into three clear steps of applying techniques of accounting and finance to evaluate a restaurant business: It introduces how to consolidate major activities of a restaurant business into useful accounting information. It explains how accounting information is analyzed and then used to forecast the future. And it introduces the methods of projecting the future and determining the current value of a restaurant business.

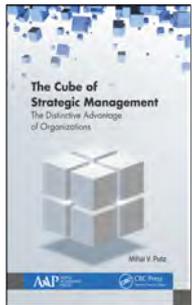
Apple Academic Press

**Market:** Hospitality & Tourism Management  
September 2018: 241 x 191: 286pp  
Hb: 978-1-771-88645-1: **£116.00**  
eBook: 978-1-315-14739-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886451](http://www.crcpress.com/9781771886451)

## The Cube of Strategic Management

The Distinctive Advantage of Organizations



**Mihai V. Putz**, Full Professor, Faculty of Chemistry, Biology, Geography, Laboratory of Computational and Structural Physical Chemistry for Nanosciences and QSAR, West University of Timisoara, Romania

This volume introduces the author's novel new business model of the geometrization of management. The author uses the cube and its 8 corners for the first time to represent 8 forms of the strategic management way of business, in that the 8 corners of a cube represent the competitive advantage of (any) organization. Their link, dynamics, symmetries, inter-conversion, and extension stay at the basis of the so-called "cube of strategic management." The book spans the fundamental and the theoretical aspects and advances this new management model in response to the current and future 21st-century synergic

interconnection needs in addressing management and marketing post-modern strategies.

Apple Academic Press

**Market:** Business Management

April 2019: 229 x 152: 328pp

Hb: 978-1-771-88775-5: **£116.00**

eBook: 978-0-429-39764-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887755](http://www.crcpress.com/9781771887755)

## The Future of Organizations

Workplace Issues and Practices



Edited by **Arvind K. Birdie**, Point Pleasant, New Jersey, USA  
*Series: 21st Century Business Management*

This new book, *The Future of Organizations: Workplace Issues and Practices* provides valuable insights into how organizations are changing and evolving and how human resource personnel, employers, and employees are reacting to these emerging workplace transitions. Today's successful organizations must be learning organizations in that they must keep abreast and change with the new workplace dynamics. Many of these concepts are new and challenging for employers and employees, and there is very little qualitative and quantitative research available that has practical implications for policymakers and employers/leaders. This book helps to fill the gap.

Apple Academic Press

**Market:** Business Management

July 2018: 229 x 152: 232pp

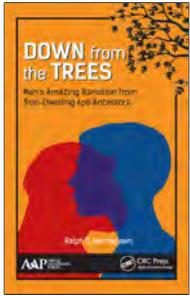
Hb: 978-1-771-88623-9: **£108.00**

eBook: 978-1-315-11489-7

\* For full contents and more information, visit: [www.crcpress.com/9781771886239](http://www.crcpress.com/9781771886239)

## Down from the Trees

Man's Amazing Transition from Tree-Dwelling Ape Ancestors



Ralph D. Hermansen

*Down from the Trees: Man's Amazing Transition from Tree-Dwelling Ape Ancestors* covers the evolution of man from tree-dwelling ape to Homo erectus as he is today. Using easy-to-read language, the author takes complex, jargon-filled material and extracts the essence of the topic and conveys it in a clear and engaging manner. He approaches the subject of human evolution from three different disciplines: fossil evidence and its interpretation, evolutionary theory and its applicability, and genetic evidence and its ability to unlock prehistoric information. The third discipline has advanced unbelievably in the last few years, and this book includes the most up-to-date research.

Apple Academic Press

Market: Anthropology

June 2018: 229 x 152: 402pp

Hb: 978-1-771-88733-5: £76.99

eBook: 978-0-429-46595-6

\* For full contents and more information, visit: [www.crcpress.com/9781771887335](http://www.crcpress.com/9781771887335)

## Effective School Librarianship

Successful Professional Practices from Librarians around the World:  
(2-volume set)



Patrick Lo, Heather Rogers and Dickson K.W. Chiu

This new book, *Effective School Librarianship: Successful Professional Practices from Librarians around the World* (2-volume set), provides a series of informative interviews with school/teacher librarians practicing in different parts of the world. It showcases the resilience, creativity and best practices from successful school librarians from Europe, Asia, Africa, Australia, and North and South America. The librarians interviewed come from all different schools and schools systems, from a tiny recently built school library in rural villages in Africa to the modern cities in Sweden, showing learning environment in different geographical, national, and cultural contexts, etc.

Apple Academic Press

Market: Library and Information Science

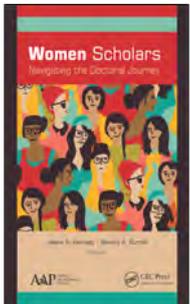
April 2018: 229 x 152: 534pp

Hb: 978-1-771-88656-7: £139.00

eBook: 978-1-315-14957-8

\* For full contents and more information, visit: [www.crcpress.com/9781771886567](http://www.crcpress.com/9781771886567)

## Women Scholars: Navigating the Doctoral Journey



Edited by Jelane A. Kennedy and Beverly A. Burnell

Over and over, studies have concluded that the doctoral experience is a monumental challenge in higher education, particularly for women. This book, *Women Scholars: Navigating the Doctoral Journey*, provides an enlightening ethnographic look at women and their doctoral developmental experiences. The book's aim is to empower women to be able to contextualize their experience while also offering support and inspiring readers to consider alternative ways to successfully approach the doctoral process. Women anticipating and entering the life of academia will benefit from the voices and experiences shared by the women scholars in this book.

Apple Academic Press

Market: Government & Education

December 2018: 235 x 156: 306pp

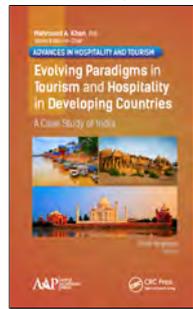
Hb: 978-1-771-88678-9: £108.00

eBook: 978-1-351-20263-3

\* For full contents and more information, visit: [www.crcpress.com/9781771886789](http://www.crcpress.com/9781771886789)

## Evolving Paradigms in Tourism and Hospitality in Developing Countries

A Case Study of India



Edited by **Bindu Varghese**

*Series: Advances in Hospitality and Tourism*

This new volume highlights of a broad selection of valuable research work by renowned professionals and scientists from the academia and travel industry. It provides a wide-ranging vision of a multitude of trends in the global travel and tourism industry today and in the future. The contributors examine a diverse selection of topics and share their conducted exploratory investigations to frame their implications and outcomes. In addition, this compilation also synthesizes the experiential aspects contributed by travel professionals and practitioners as well as academia. The volume reflects upon the wide-ranging conceptual approaches to the subject of tourism.

Apple Academic Press

**Market:** Business

September 2018: 229 x 152: 524pp

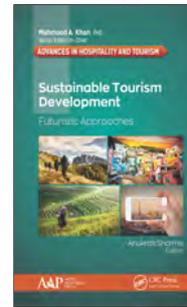
Hb: 978-1-771-88630-7: **£124.00**

eBook: 978-1-315-10304-4

\* For full contents and more information, visit: [www.crcpress.com/9781771886307](http://www.crcpress.com/9781771886307)

## Sustainable Tourism Development

Futuristic Approaches



Edited by **Anukrati Sharma**

*Series: Advances in Hospitality and Tourism*

This book explores the importance of destination branding and destination marketing as well as their implications on sustainability in tourism. It incorporates ideas for new techniques in destination branding and marketing in order to maximize economic impact. The book also discusses the rising influence of social media on tourists' interest.

Apple Academic Press

**Market:** Hospitality

April 2019: 229 x 152: 325pp

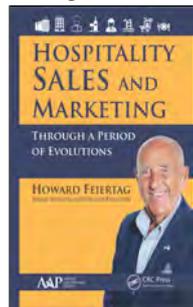
Hb: 978-1-771-88772-4: **£124.00**

eBook: 978-0-429-39799-8

\* For full contents and more information, visit: [www.crcpress.com/9781771887724](http://www.crcpress.com/9781771887724)

## Hospitality Sales and Marketing

Through a Period of Evolutions



Howard Feiertag

*Hospitality Sales and Marketing: Through a Period of Evolutions* showcases a collection of the best "Sales Clinic" columns written by the author over the course of 35 years. The volume provides an eye-opening account from one of the industry's true leaders, defining how hospitality sales have evolved from the beginning of his career till now. The articles, originally published in Hotel Management, reflect the history, development, and growth of hotel sales in the industry, which has changed so dramatically in the last 35 years. The columns cover the history of sales operations, effective techniques, growth of the fields, and the importance of the sales component of hotel operations.

Apple Academic Press

**Market:** Hospitality

June 2019: 235 x 156: 645pp

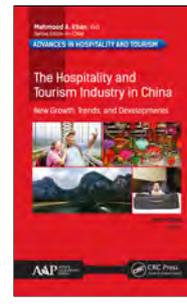
Hb: 978-1-771-88789-2: **£139.00**

eBook: 978-0-429-05720-5

\* For full contents and more information, visit: [www.crcpress.com/9781771887892](http://www.crcpress.com/9781771887892)

## The Hospitality and Tourism Industry in China

New Growth, Trends, and Developments



Edited by **Jinlin Zhao**

*Series: Advances in Hospitality and Tourism*

This new volume is an insightful look into the great changes in the hospitality and tourism industry in China in recent years. The steady growth of GDP in China, the increasing middle-income population, life style changes of the Chinese people, and fast infrastructure development (speed trains, airports, highways, and seaports, linking many mega cities, mid-level cities, and townships) have all had a significant effect on the Chinese hospitality industry, which is booming in China. The volume looks at the value drivers that have impacted hotels, restaurants, meetings and conventions, cruise line industries, tourist attractions, and destination developments.

Apple Academic Press

**Market:** Hospitality & Tourism Management

June 2018: 235 x 156: 362pp

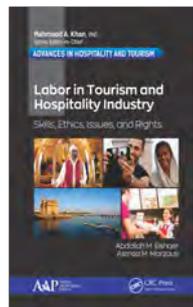
Hb: 978-1-771-88652-9: **£124.00**

eBook: 978-1-315-14742-0

\* For full contents and more information, visit: [www.crcpress.com/9781771886529](http://www.crcpress.com/9781771886529)

## Labor in Tourism and Hospitality Industry

Skills, Ethics, Issues, and Rights



Abdallah M. Elshaer and Asmaa M. Marzouk

*Series: Advances in Hospitality and Tourism*

This volume takes an in-depth look at workforce issues in the tourism and hospitality industry, focusing on labor skills, ethics, rights, and more. It examines manpower planning beyond forecasting estimates to include investigative techniques in a way that offers insight for economic planning in both tourism and tourism education. It also specifically covers the importance of ethics in the workplace and labor rights. The authors look at the specifics of the labor market of the tourism and hospitality industry, discussing the current status of the industry's organizations and how they are suffering labor shortages.

Apple Academic Press

**Market:** Hospitality & Tourism

March 2019: 235 x 156: 536pp

Hb: 978-1-771-88731-1: **£131.00**

eBook: 978-0-429-46509-3

\* For full contents and more information, visit: [www.crcpress.com/9781771887311](http://www.crcpress.com/9781771887311)

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